CFD-S03CP/S03CPL

SERVICE MANUAL

Ver. 1.5 2007.07

Photo: CFD-S03CP

Canadian Model
CFD-S03CP
AEP Model
CFD-S03CP/S03CPL
UK Model
E Model
Australian Model
CFD-S03CP

CD Section	Model Name Using Similar Mechanism	CFD-S01
	CD Mechanism Type	KSM-213CDP
	Optical Pick-up Name	KSS-213C
TC Section	Model Name Using Similar Mechanism	CFD-S01
	Tape Transport Mechanism Type	MF-S01

SPECIFICATIONS

CD player section

System
Compact disc digital audio system
Laser diode properties
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Number of channels
2
Frequency response
20 - 20 000 Hz +1/–2 dB
Wow and flutter
Below measurable limit

Radio section

Frequency range
FM: 87.5 - 108 MHz
CND, E92, MX model:
AM: 530 - 1 710 kHz
TW model:
AM: 531 - 1 611 kHz
EXCEPT CND, E92, MX, TW model:
AM/MW: 531 - 1 611 kHz (9 kHz step)
530 - 1 610 kHz (10 kHz step)
CFD-S03CPL:
LW: 153 - 279 kHz
IF

Cassette-corder section

Recording system
4-track 2 channel stereo
Fast winding time
Approx. 150 s (sec.) with Sony cassette C-60
Frequency response
TYPE I (normal): 80 - 10 000 Hz

General

Speaker
Full range: 8 cm dia., 4 Ω, cone type (2)
Outputs
Headphones jack (stereo minijack):
For 16 - 32 Ω impedance headphones
Power output
1.7 W + 1.7 W (at 4 Ω, 10% harmonic distortion)
Power requirements
For CD radio cassette-corder:
120 V AC, 60 Hz (CND, E92, MX, TW model)
220 V AC, 60 Hz (KR model)
220 – 230 V AC, 50 Hz (AR model)
230 V AC, 50 Hz (EXCEPT E92, KR, MX, AR, TW model)
9 V DC, 6 R14 (size C) batteries
For remote control:
3 V DC, 2 R03 (size AAA) batteries

– Continued on next page –

Power consumption
AC 13 W (CND, E92, MX model)
AC 12 W (EXCEPT CND, E92, MX model)
Battery life
For CD radio cassette-corder:

FM recording
Sony R14P: approx. 6 h
Sony alkaline LR14: approx. 20 h
Tape playback
Sony R14P: approx. 3 h
Sony alkaline LR14: approx. 12 h
CD playback
Sony R14P: approx. 1.5 h
Sony alkaline LR14: approx. 4.5 h

Dimensions
Approx. 360 × 141 × 235 mm (w/h/d)
(incl. projecting parts)
Mass
Approx. 2.6 kg (incl. batteries)
Supplied accessory
AC power cord (1)
Remote control (1)

Design and specifications are subject to change without notice.

- Abbreviation
  CND : Canadian model
  E92 : AC 120V area in E model
  KR : Korea model
  MX : Mexican model
  AR : Argentina model
  TW : Taiwan model

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

● UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

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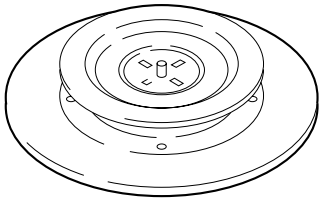
SECTION 1
SERVICING NOTES

CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the lid (CD), use Chuck Plate Jig.
• Code number of Chuck Plate Jig: X-4918-255-1



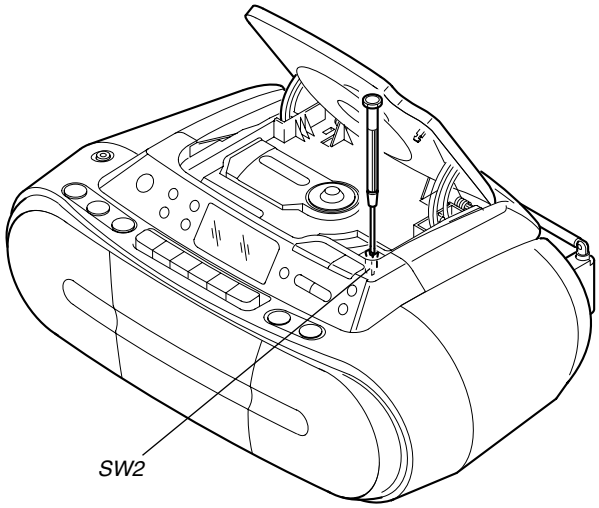
NOTE FOR REPLACEMENT OF THE IC804 AND IC806

There have been changes to the 3.3V regulator circuit in the course of production.
When repairing the 3.3V regulator circuit, check which of TYPE A or B is applicable as specified in the table below.

Ref. No.	TYPE A	TYPE B
IC804	S-816A33AMC-BAI-T2-G	NO MOUNT
IC806	NO MOUNT	XC6202P332FR
R883	100k	NO MOUNT
R884	220k	NO MOUNT

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

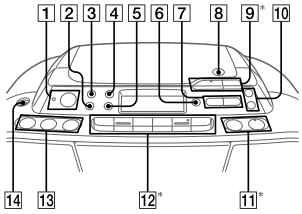
1. Turn ON the [OPERATE] button and press [CD] button to CD position.
2. Open the CD lid.
3. Turn on SW2 with screwdriver, etc. as following figure.
4. Press the [►II] (CD) button.
5. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
   Objective lens moves up and down three times for focus search.

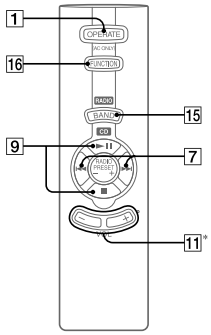


SECTION 2
GENERAL

This section is extracted from instruction manual.

Basic Operations





* VOLUME + (VOL + on the remote) 11, ▶II 9 and ◀◀ 12 on the unit have a tactile dot.

Before using the unit

To turn on/off the power
European model: Press OPERATE 1.
Other models: Press POWER 1.

To adjust the volume
Press VOLUME +, – (VOL +, – on the remote) 11.

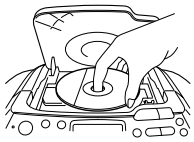
To listen through headphones
Connect the headphones to the ∩ (headphones) jack 14.

To reinforce the bass sound
Press MEGA BASS 2.
"MEGA BASS" appears in the display.
To return to normal sound, press the button again.

Playing a CD/MP3 disc

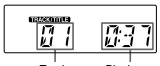
1 Press CD 13 on the unit (direct power-on).
(On the remote, press OPERATE or POWER 1 and then press FUNCTION 16 repeatedly until "CD" appears in the display.)

2 Press ⏏ PUSH OPEN/CLOSE 8 on the unit, and place a disc with the label side up on the CD compartment.
To close the CD compartment, press ⏏ PUSH OPEN/CLOSE 8 on the unit.

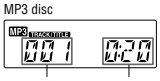


3 Press ▶II 9.
The player plays all the tracks/MP3 files once.
When you play a MP3 disc, MP3 indicator lights up after the player reads the file information.

Audio CD



MP3 disc

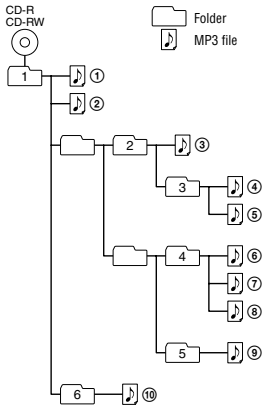


* If there is no folder, "ROOT" appears in the display.
** If the playing time is more than 100 minutes, it appears "--:--" in the display.

To	Press
Pause playback	▶II 9. To resume play, press it again.
Stop playback	■ 9.
Go to the next track/MP3 file	▶▶I 7.
Go back to the previous track/ MP3 file	I◀◀ 7.
Select a folder on an MP3 disc	🗀 + 10 on the unit to go forward and 🗀 – 10 to go backward.
Play the selected folder only (MP3 disc only)	MODE 4 on the unit until "FLDR" appears, 🗀 + or – 10 on the unit to select a folder and then ▶II 9 to start playing.
Locate a point while listening to the sound	▶▶I (forward) or I◀◀ (backward) 7 while playing and hold it until you find the point.
Locate a point while observing the display	▶▶I (forward) or I◀◀ (backward) 7 in pause and hold it until you find the point.
Remove the CD	⏏ PUSH OPEN/CLOSE 8 on the unit.

Tips
- Playback starts from the track/MP3 file you last stopped playing (Resume play). During stop, the track/MP3 file number to be played is displayed.
- To cancel the resume play (to start play from the beginning of the first track/MP3 file), press ■ 9 in stop mode. When you open the CD compartment or turn off the unit, the resume play is also canceled.

Example of folder structure and playing order
The playing order of the folders and files is as follows:



Notes on MP3 discs
- When the disc is inserted, the player reads all the files on that disc. During this time, "READING" is displayed. If there are many folders or non-MP3 files on the disc, it may take a long time for play to begin or for the next MP3 file to start play.
  We recommend that you do not save unnecessary folders or files other than MP3 ones in the disc to be used for MP3 listening.
- A folder that does not include an MP3 file is skipped.
- Maximum number of files: 255
  Maximum number of folders: 150 (including the root folder)
  Maximum number of folders and files in total: 256
  Maximum directory levels: 8
- Folder names and file names can be displayed with up to 30 characters including quotation marks.
- The characters A - Z, 0 - 9, and _ can be displayed on this player. Other characters are displayed as "_".
- This player conforms to Version 1.0, 1.1, 2.2, 2.3 and 2.4 of the ID3 tag format. When the file has the ID3 tag information, "song title", "artist name" and "album name" can be displayed and "ID3" appears in the display. If the file does not have the ID3 tag information, file name appears instead of song title, folder name appears instead of album name and "no artist" appears instead of artist name. The ID3 tag information can be displayed with up to 15 characters.
- When naming, be sure to add the file extension "mp3" to the file name.
- If you put the extension "mp3" to a file other than an MP3 file, the player cannot recognize the file properly and will generate random noise that could damage your speakers.
- The file name does not correspond to the ID3 tag.

Listening to the radio

1 Press RADIO•BAND•AUTO PRESET 13 on the unit (BAND 15 on the remote) repeatedly (direct power-on).
Each time you press the button, the indication changes as follows:
CFD-S03CPL: "FM" → "MW" → "LW"
CFD-S03CP: "FM" → "AM"

2 Hold down TUNE + or – 10 until the frequency digits begin to change in the display.
The player automatically scans the radio frequencies and stops when it finds a clear station.
If you can not tune in a station, press TUNE + or – 10 repeatedly to change the frequency step by step.
When an FM stereo broadcast is received, "ST" appears.

Tip
If the FM broadcast is noisy, press MODE 4 until "MONO" appears in the display and the radio will play in monaural.

Changing the AM/MW tuning interval
If you need to change the AM/MW tuning interval, do the following:

1 Press RADIO•BAND•AUTO PRESET 13 on the unit until "AM" or "MW" is displayed.

2 Press DISPLAY•ENTER 5 on the unit for 2 seconds.

3 Press RADIO•BAND•AUTO PRESET 13 on the unit for 2 seconds.
"9K STEP" or "10K STEP" flashes.

4 Press PRESET + or – 7 on the unit to select "9K STEP" for 9 kHz interval or "10K STEP" for 10 kHz interval.

5 Press DISPLAY•ENTER 5 on the unit.

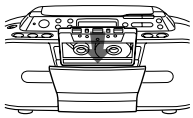
After changing the tuning interval, you need to reset your preset AM/MW radio stations.

Playing a tape

Use buttons on the unit for the operation.

1 Press TAPE 13 on the unit (direct power-on).

2 Press ■⏏ 12 on the unit, and insert the tape into the tape compartment with the side you want to play facing you. Use TYPE I (normal) tape only. Close the compartment.
Make sure there is no slack in the tape to avoid damaging the tape or the unit.



3 Press ◀◀ 12.
The player starts playing.

To	Press
Pause playback	II 12 on the unit. To resume play, press it again.
Stop playback	■⏏ 12 on the unit.
Fast-forward or rewind*	◀◀ or ▶▶ (fast forward or rewind) 12 on the unit.
Eject the cassette	■⏏ 12 on the unit.

* When the tape is wound to the end, press ■⏏ 12 to release ◀◀ or ▶▶ 12.

Recording on a tape

Use buttons on the unit for the operation.

1 Press ■⏏ 12 on the unit to open the tape compartment and insert a blank tape with the side you want to record on facing you. Use TYPE I (normal) tape only. Close the compartment.

2 Select the program source you want to record.
To record from the CD player, insert a CD and press CD 13.
To record from the radio, tune in the station you want.

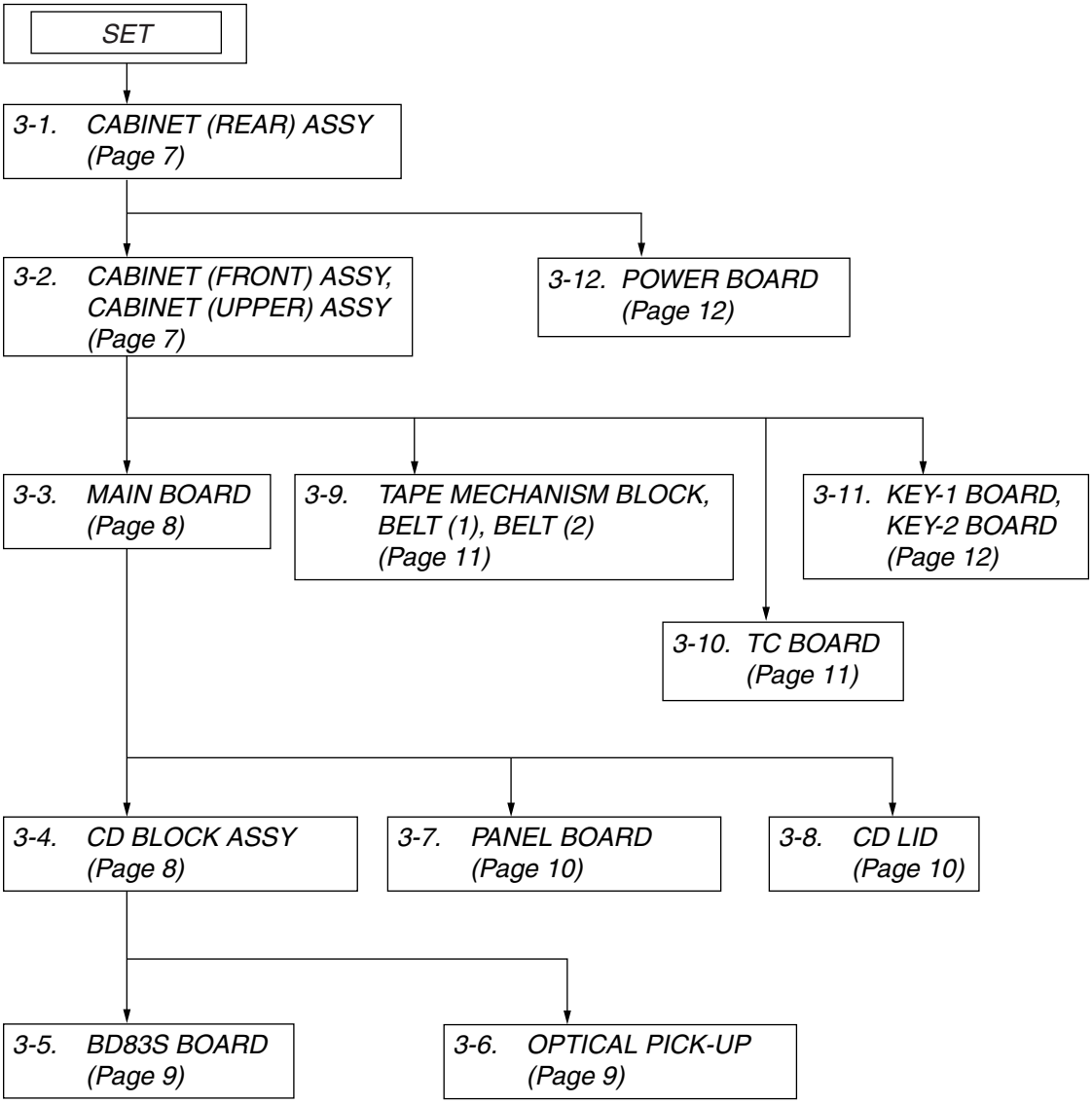
3 Press ● 12 on the unit to start recording
(◀◀ is depressed automatically).

To	Press
Pause recording	II 12 on the unit. To resume recording, press it again.
Stop recording	■⏏ 12 on the unit.

Tips
- Adjusting the volume or the audio emphasis will not affect the recording level.
- If the AM/MW/LW program makes a whistling sound after you've press ● 12 in step 3, press MODE 4 on the unit to select the position of ISS (Interference Suppress Switch) that most decreases the noise.
- For the best results, use the AC power as a power source for recording.
- To erase a recording, proceed as follows:
  1 Insert the tape whose recording you want to erase.
  2 Press TAPE 13 on the unit.
  3 Press ● 12 on the unit.

SECTION 3
DISASSEMBLY

Note: This set can be disassemble according to the following sequence.


SET
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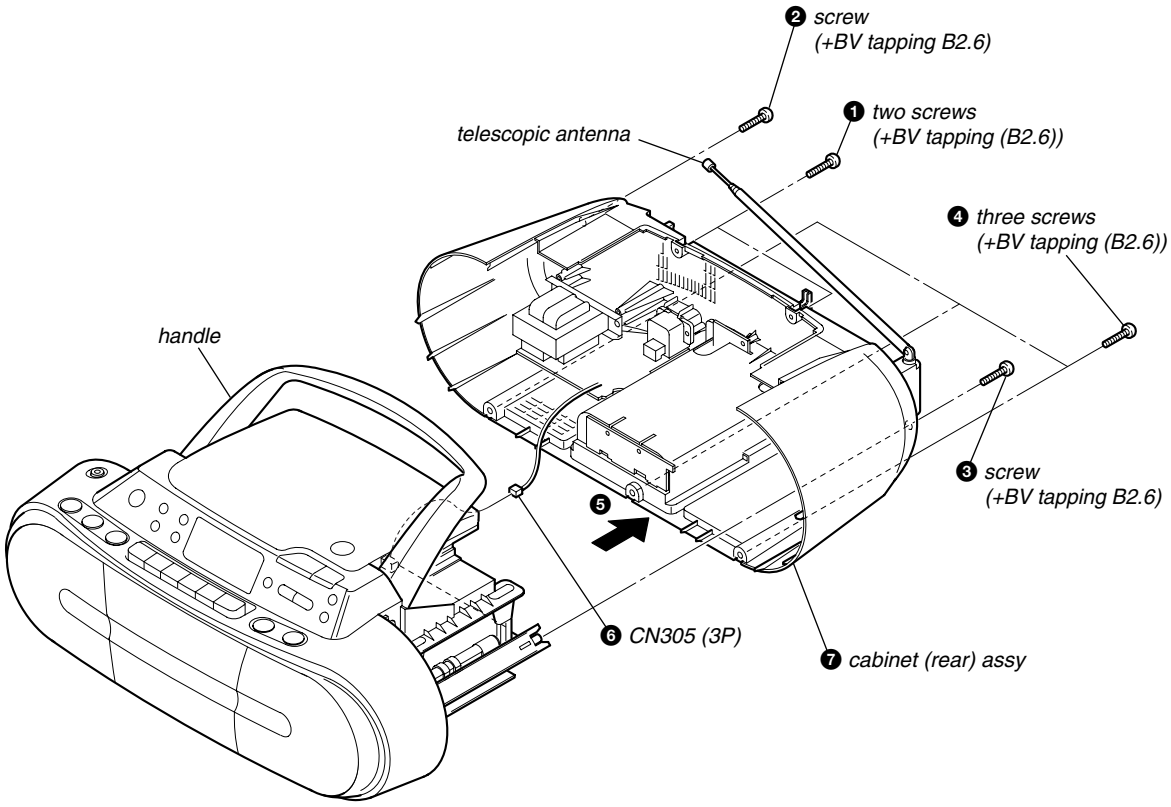
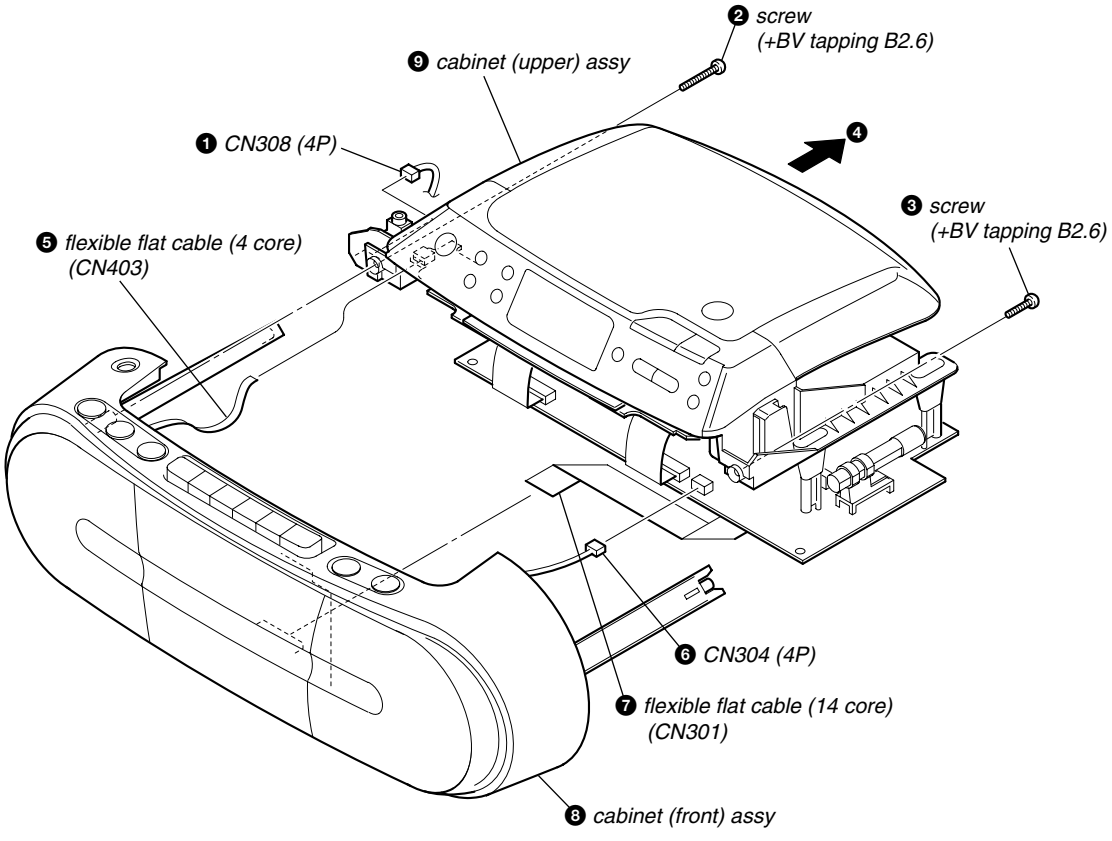
3-6. OPTICAL PICK-UP (Page 9)

Note: Follow the disassembly procedure in the numerical order given.

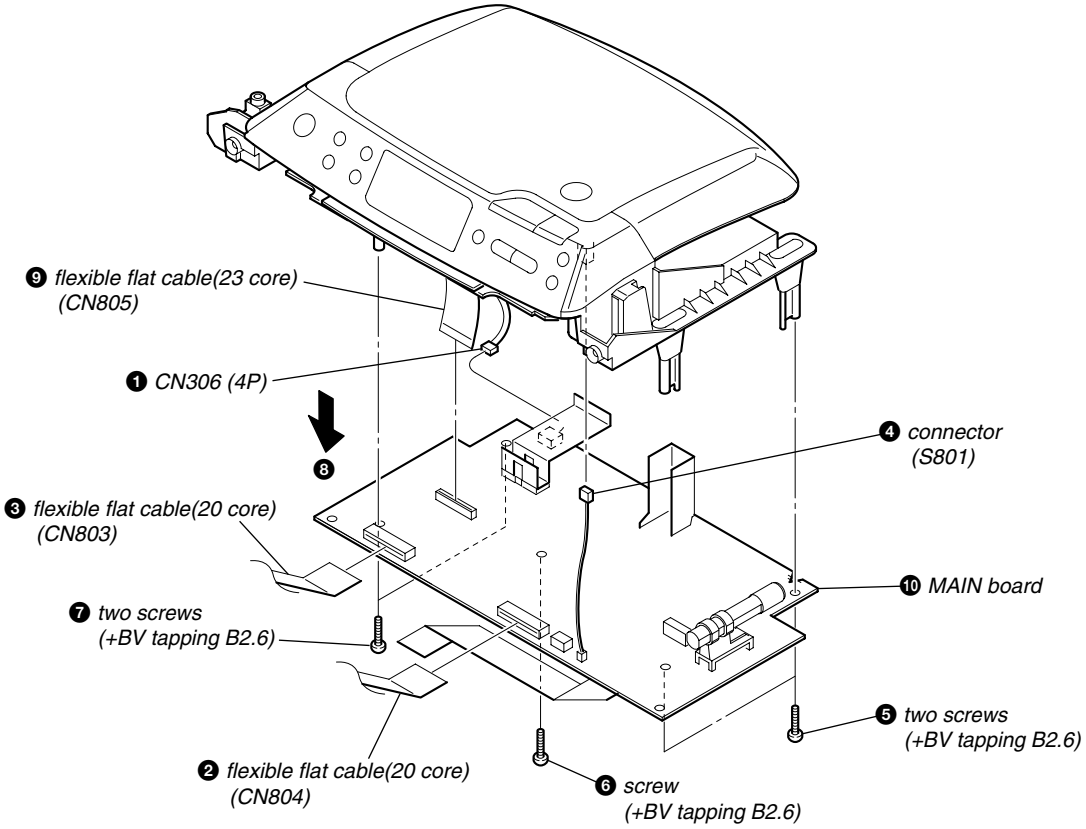
3-1. CABINET (REAR) ASSY



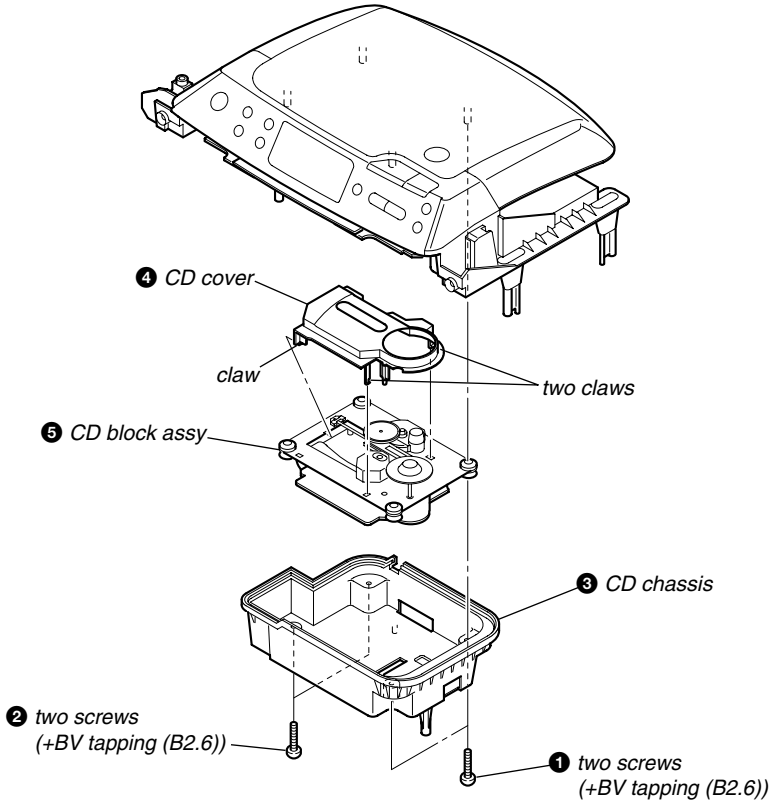
3-2. CABINET (FRONT) ASSY, CABINET (UPPER) ASSY



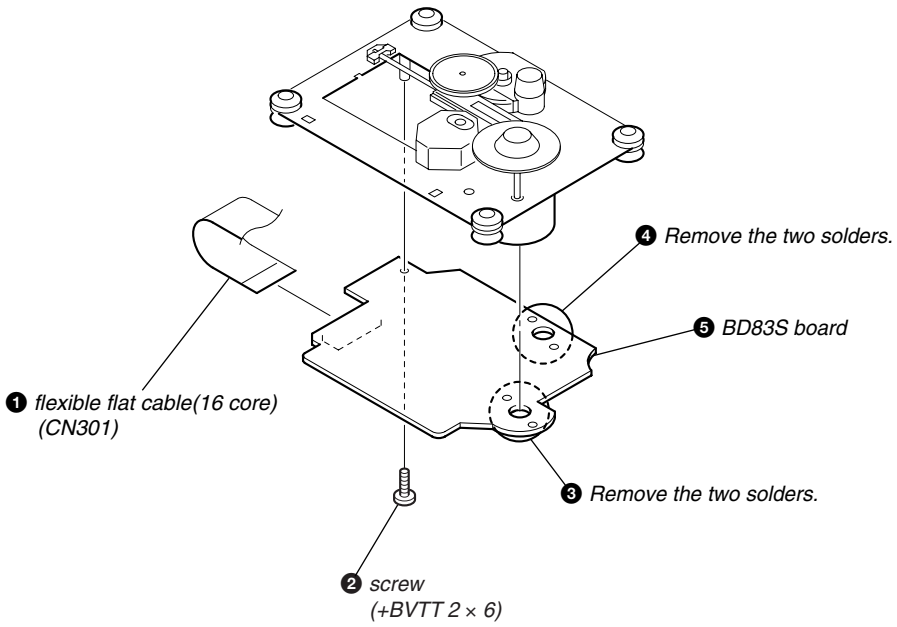
3-3. MAIN BOARD



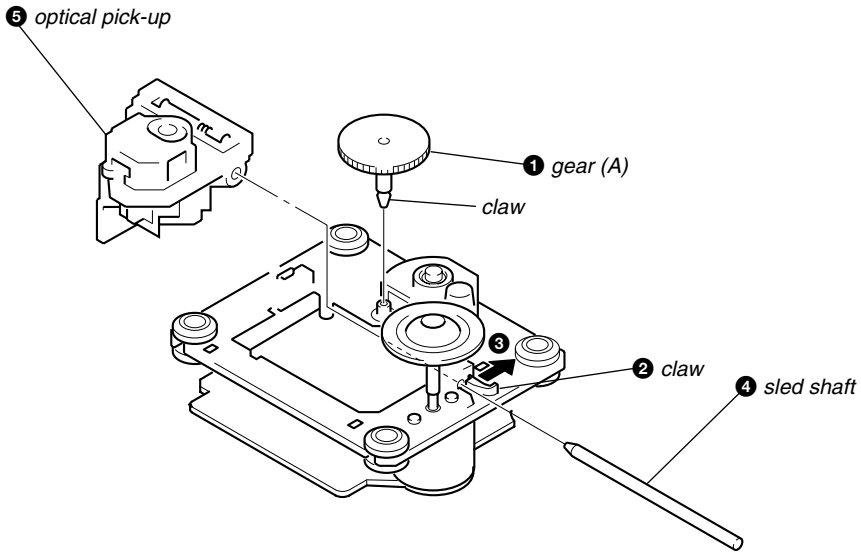
3-4. CD BLOCK ASSY



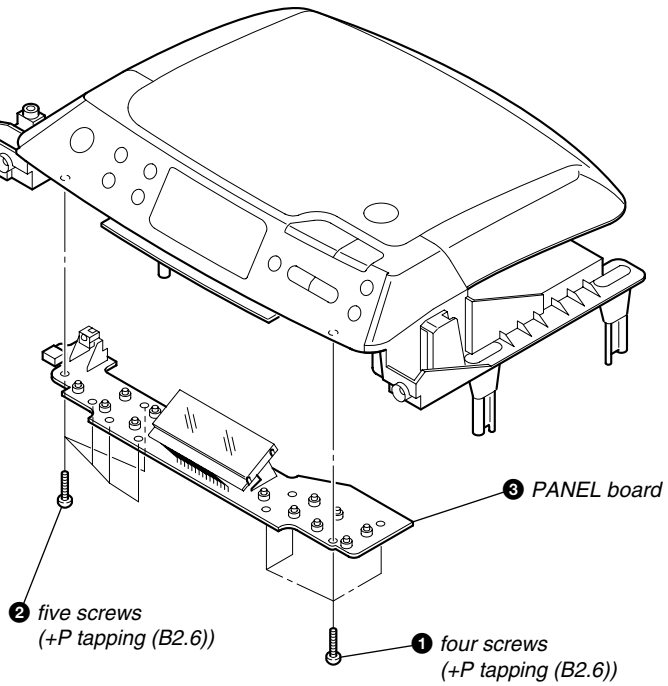
3-5. BD83S BOARD



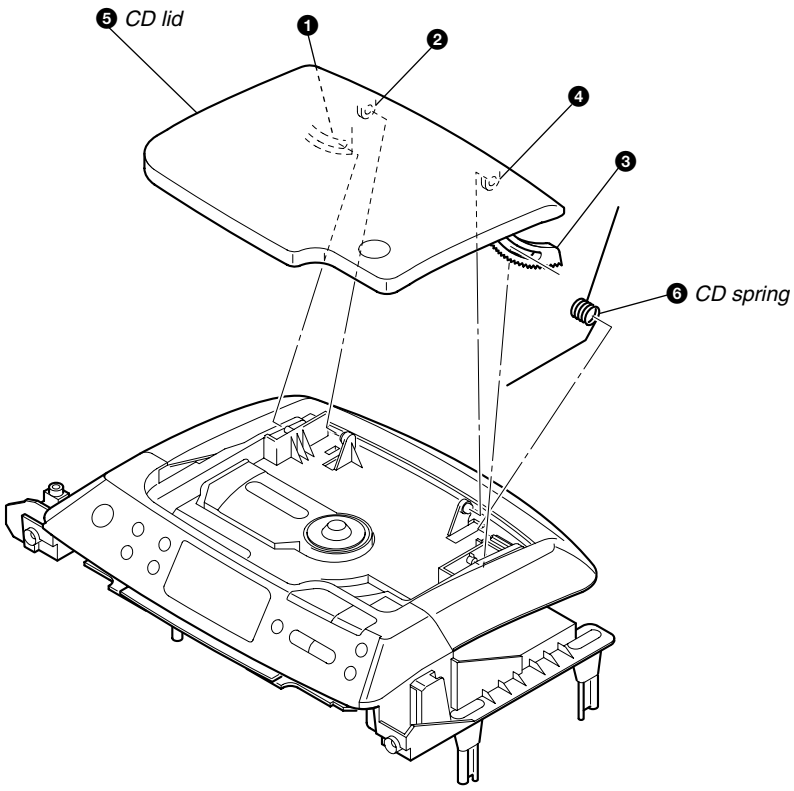
3-6. OPTICAL PICK-UP



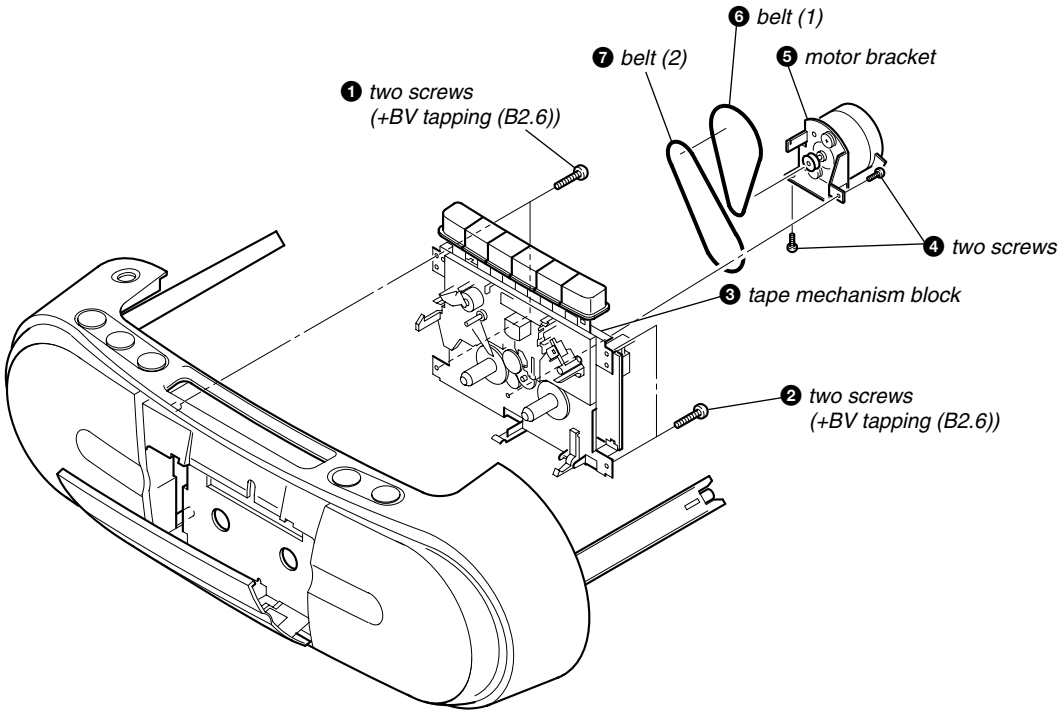
3-7. PANEL BOARD



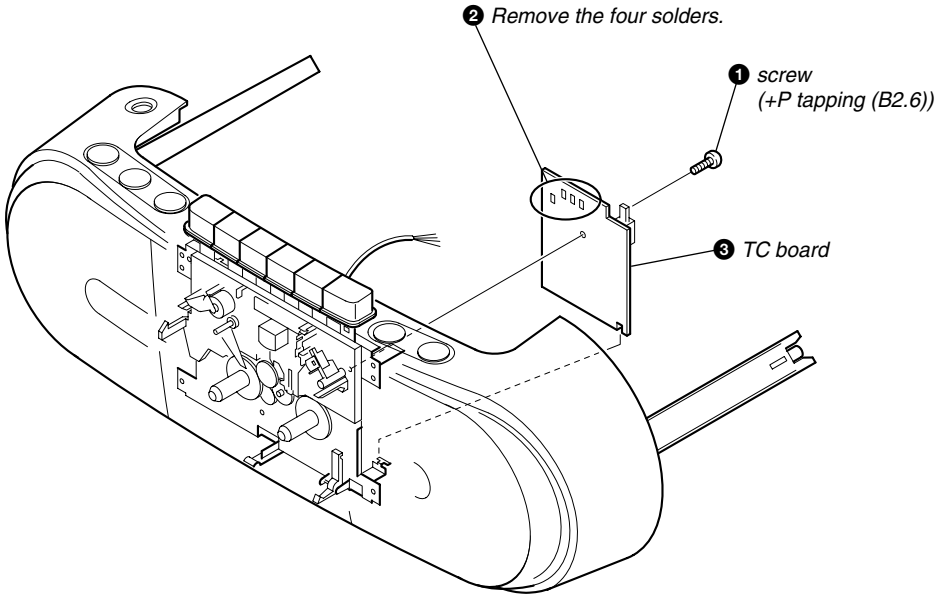
3-8. CD LID



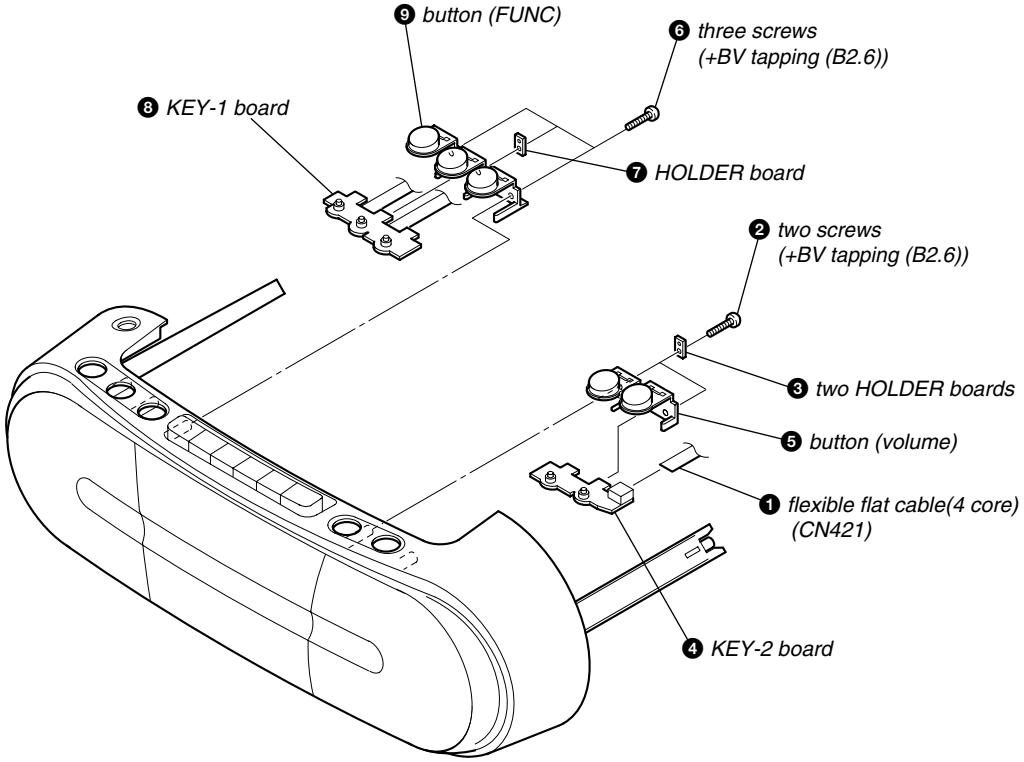
3-9. TAPE MECHANISM BLOCK, BELT (1), BELT (2)



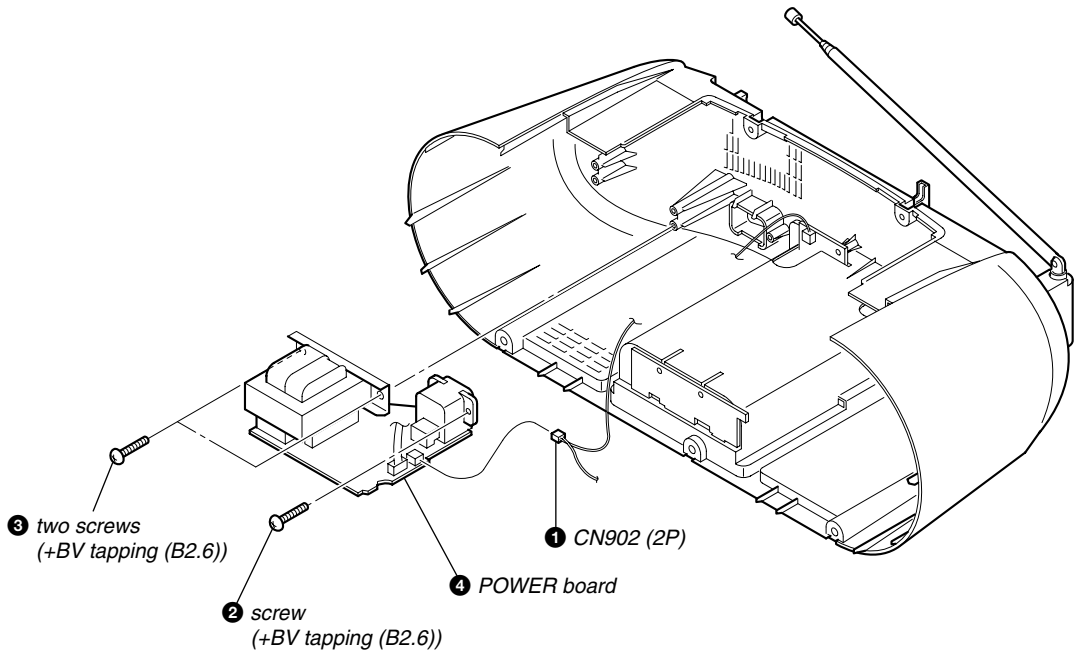
3-10. TC BOARD



3-11. KEY-1 BOARD, KEY-2 BOARD



3-12. POWER BOARD



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage (9V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	2.95 – 6.86 mN • m (30 – 70 g • cm) (0.42 – 0.97 oz • inch)
FWD Back Tension	CQ-102C	0.15 – 0.53 mN • m (1.5 – 5.5 g • cm) (0.021 – 0.076 oz • inch)
FF	CQ-201B	more than 5.88 mN • m (more than 60 g • cm) (more than 0.83 oz • inch)
REW	CQ-201B	more than 5.88 mN • m (more than 60 g • cm) (more than 0.83 oz • inch)

Tape Tension Measurement

Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 100 g (more than 3.53 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TAPE SECTION **0 dB = 0.775 V**

• Standard Output Level

Output terminal	HP OUT
load impedance	32 Ω
output signal level	0.25 V (–10 dB)

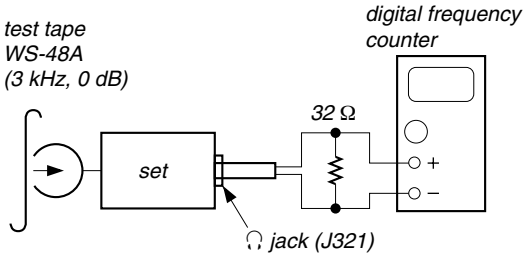
• Test Tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	tape speed adjustment

Tape Speed Adjustment

Procedure:

Mode: playback



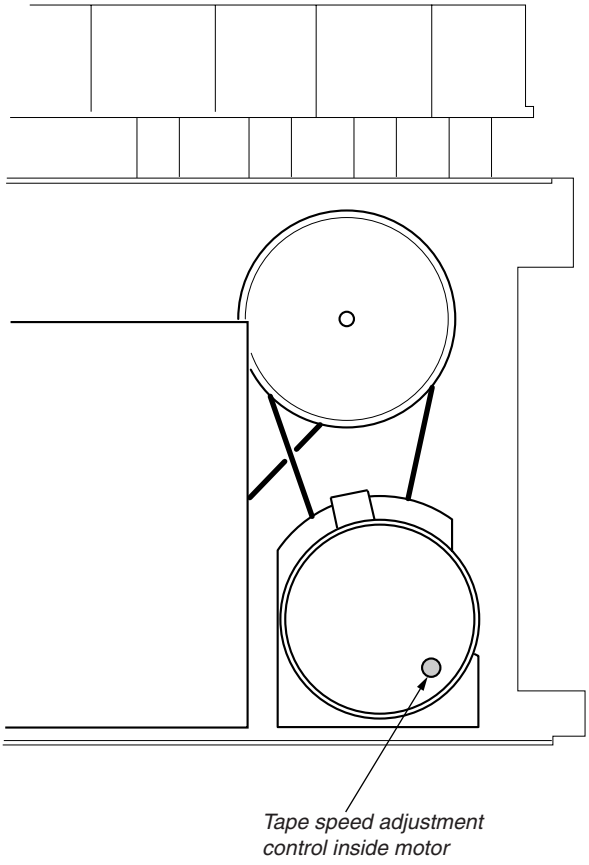
Adjust so that the value on the digital frequency counter is 3,000 Hz.

Specification Value:

Digital frequency counter
2,910 to 3,090 Hz

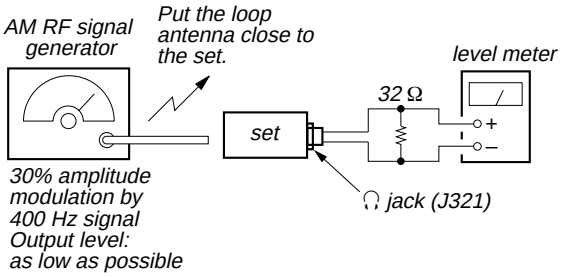
Adjust so that the frequency at the beginning and that at the end of tape winding are between 2,910 to 3,090 Hz.

Adjustment Location:

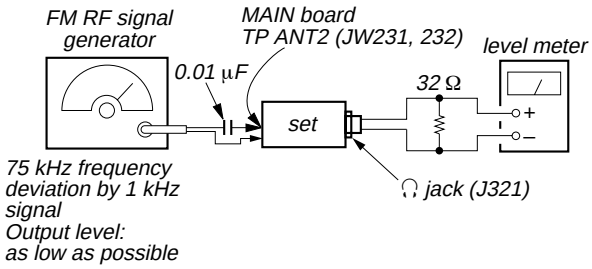


TUNER SECTION | 0 dB = 1 μV

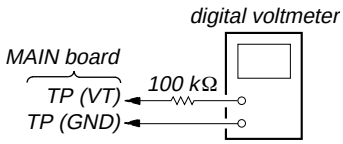
[AM (MW/LW)]
Setting:
Function: RADIO/BAND/AUTO PRESET
Band: MW or LW



[FM]
Setting:
Function: RADIO/BAND/AUTO PRESET
BAND button: FM



- **Connecting Digital Voltmeter (FM, MW and LW)**



- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
- Remove FM antenna in FM adjustment.

AM (MW/LW) IF ADJUSTMENT	
Adjust for a maximum reading on level meter	
T1	450 kHz

LW FREQUENCY COVERAGE ADJUSTMENT (AEP)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L3	279 kHz	5.3 ± 0.5 V
Confirmation	153 kHz	0.6 ± 0.05 V

LW TRACKING ADJUSTMENT (AEP)	
Adjust for a maximum reading on level meter	
ANT1-2	162 kHz
CT5	261 kHz

MW FREQUENCY COVERAGE ADJUSTMENT (AEP)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
Confirmation	531 kHz	0.9 ± 0.2 V
Confirmation	1,611 kHz	5.5 ± 0.5 V

MW FREQUENCY COVERAGE ADJUSTMENT (EXCEPT CND, AEP, E92, MX)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L3	531 kHz	0.8 ± 0.05 V
Confirmation	1,611 kHz	5.0 ± 0.5 V

MW FREQUENCY COVERAGE ADJUSTMENT (CND, E92, MX)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L3	530 kHz	0.8 ± 0.5 V
Confirmation	1,710 kHz	5.8 ± 0.05 V

MW TRACKING ADJUSTMENT (EXCEPT CND, E92, MX)	
Adjust for a maximum reading on level meter	
ANT1-1	621 kHz
CT3	1,404 kHz

MW TRACKING ADJUSTMENT (CND, E92, MX)	
Adjust for a maximum reading on level meter	
ANT1-1	620 kHz
CT3	1,400 kHz

FM IF ADJUSTMENT	
Adjust for a minimum reading on level meter	
L6	10.7 MHz

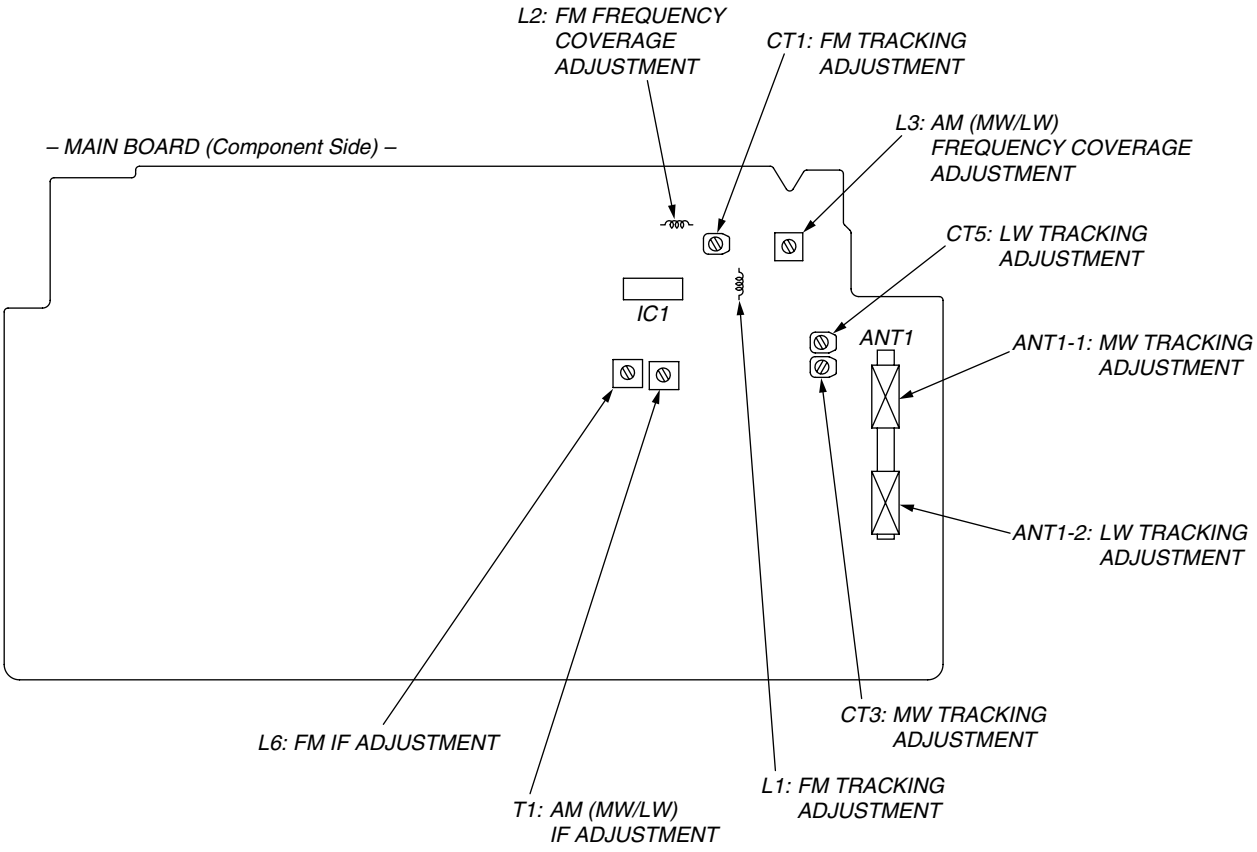
FM FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L2	108 MHz	3.0 ± 0.2 V
Confirmation	87.5 MHz	1.5 ± 0.5 V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1	87.5 MHz
CT1	108 MHz

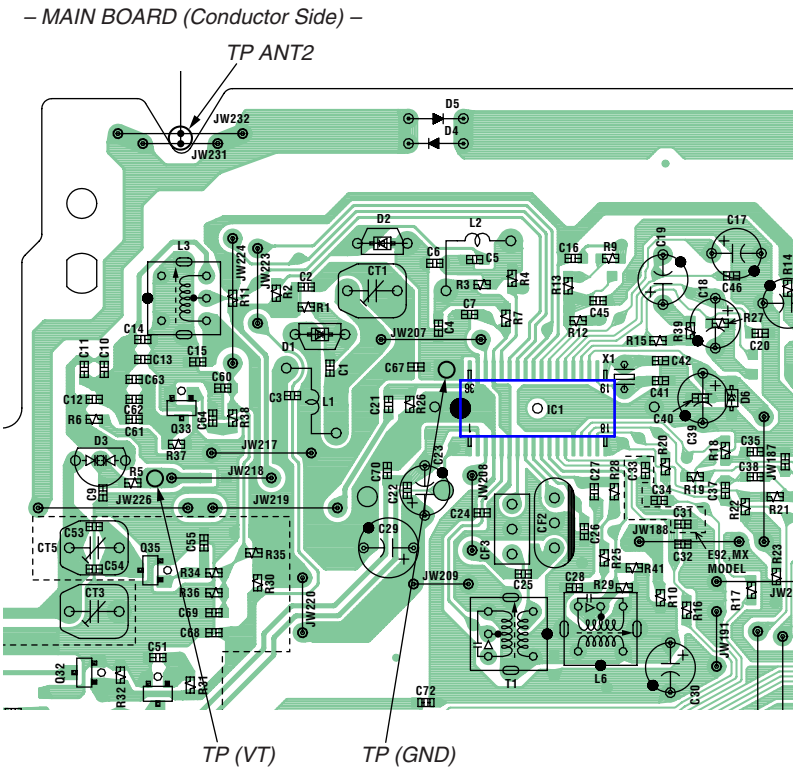
Adjustment and Connecting Location:
MAIN board (See page 15)

- Abbreviation
  CND : Canadian model
  E92 : AC 120V area in E model
  MX : Mexican model

Adjustment Location:


L2: FM FREQUENCY COVERAGE ADJUSTMENT
CT1: FM TRACKING ADJUSTMENT
L3: AM (MW/LW) FREQUENCY COVERAGE ADJUSTMENT
– MAIN BOARD (Component Side) –
CT5: LW TRACKING ADJUSTMENT
IC1
ANT1
ANT1-1: MW TRACKING ADJUSTMENT
ANT1-2: LW TRACKING ADJUSTMENT
L6: FM IF ADJUSTMENT
CT3: MW TRACKING ADJUSTMENT
L1: FM TRACKING ADJUSTMENT
T1: AM (MW/LW) IF ADJUSTMENT

Test Point:



CD SECTION

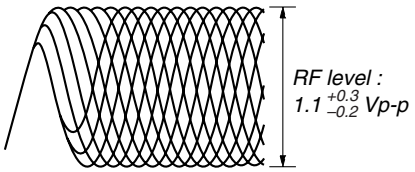
CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

FOCUS BIAS CHECK

1. Connect the oscilloscope between IC201 pin ⑦⓪ and pin ⑤⑥ (or TP (RFAC0) and TP (VC)).
2. Insert the disc (PATD-012 (Tr 15)). (Part No. : 4-225-203-01)
3. Press the ► II (CD) button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

• RF signal reference waveform (eye pattern)

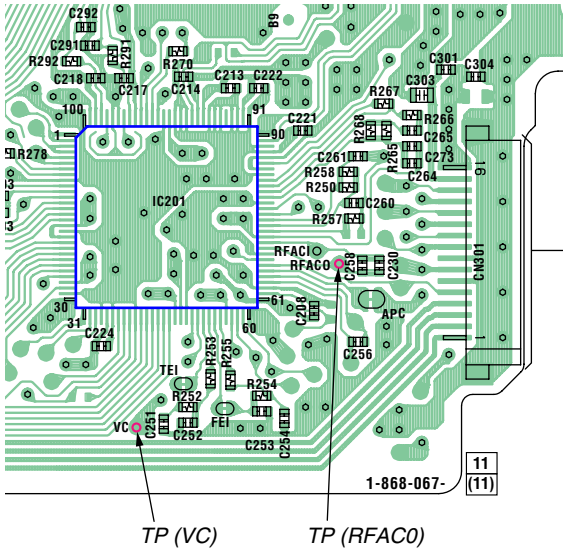
VOLT/DIV : 50 mV (10 : 1 probe in use)
TIME/DIV : 500 nS



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

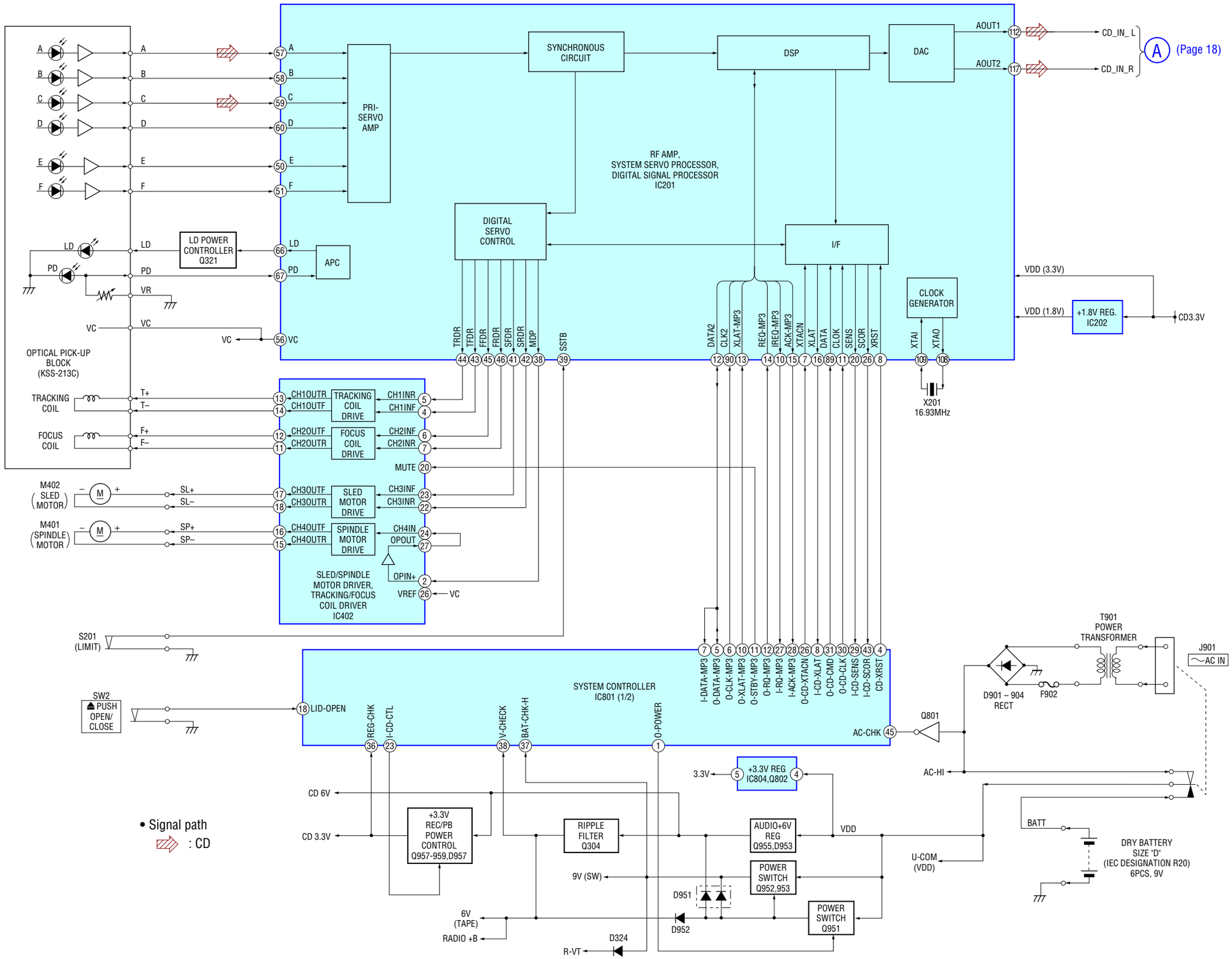
Test Point:

– BD83S BOARD (Conductor Side) –

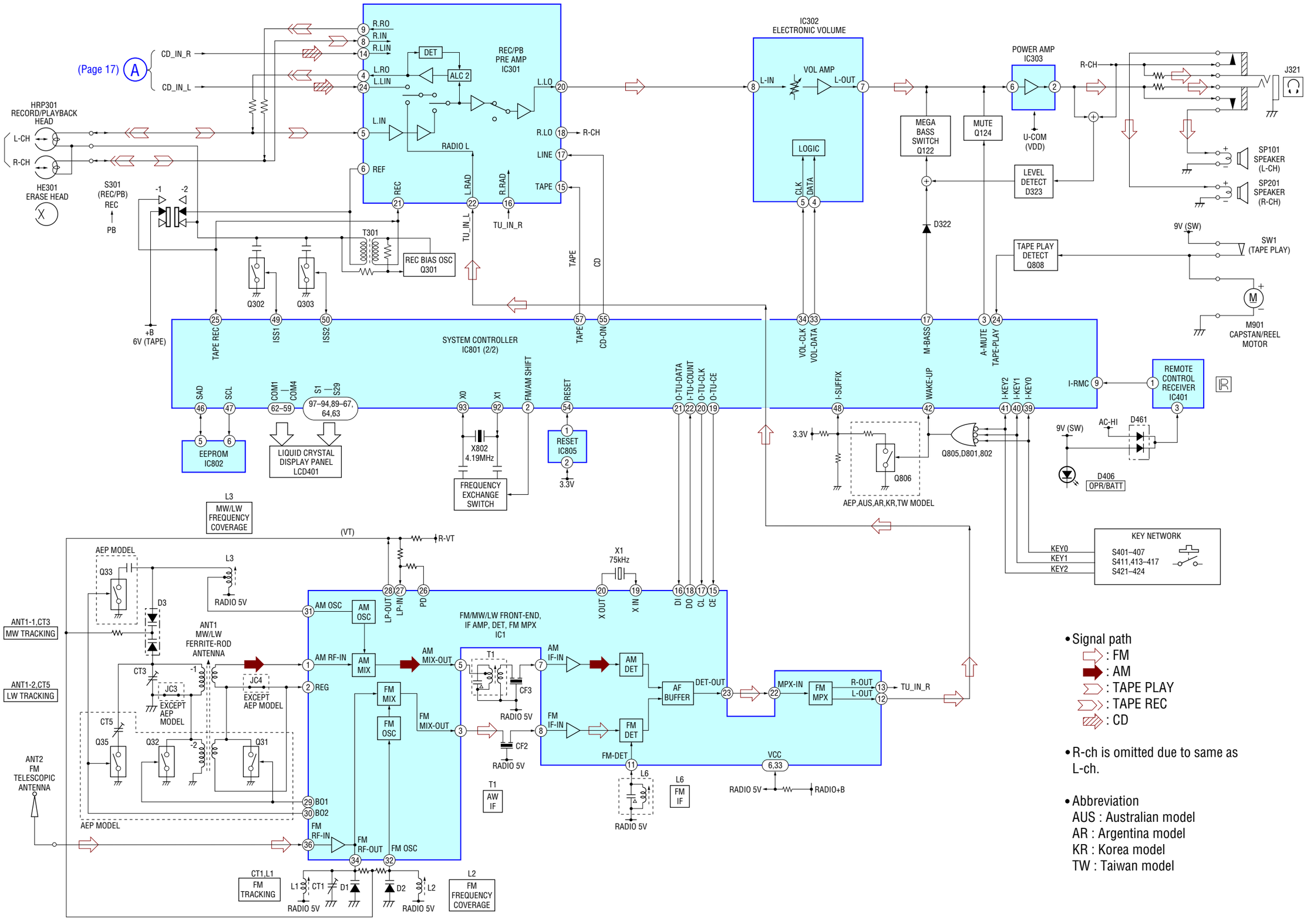


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM — CD SECTION —

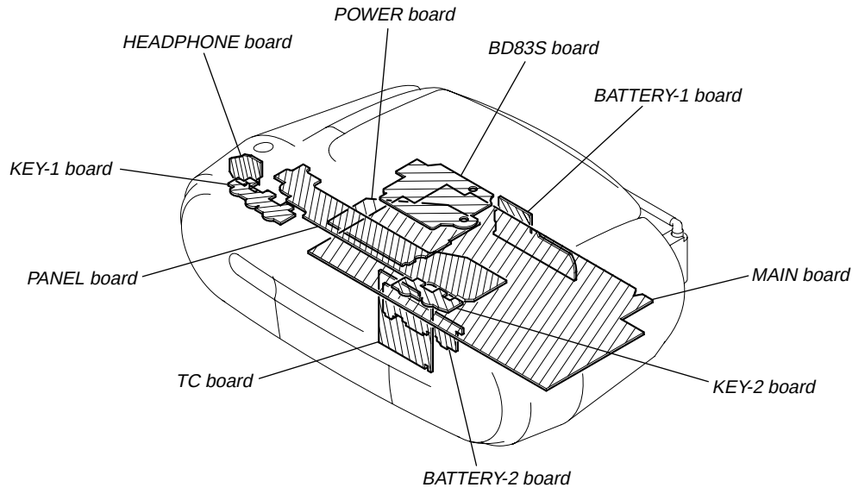


6-2. BLOCK DIAGRAM — MAIN SECTION —



- Signal path
  - : FM
  - : AM
  - : TAPE PLAY
  - : TAPE REC
  - : CD
- R-ch is omitted due to same as L-ch.
- Abbreviation
  AUS : Australian model
  AR : Argentina model
  KR : Korea model
  TW : Taiwan model

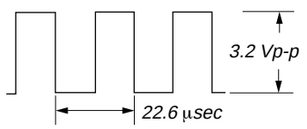
6-3. CIRCUIT BOARDS LOCATION



• Waveforms

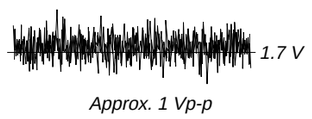
— BD83S Board — (CD PLAY)

① IC201 ① (LRCK)



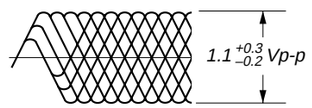
1 V/div, 10 µsec/div

③ IC201 ⑤③ (TEO)



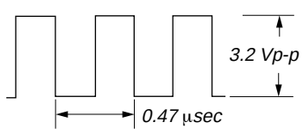
1 V/div, 5 msec/div

⑤ IC201 ⑦⓪ (RFACO)



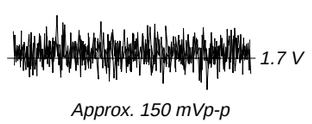
500 mV/div, 0.5 µsec/div

② IC201 ⑤ (BCK)



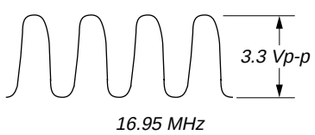
1 V/div, 200 nsec/div

④ IC201 ⑤⑤ (FEO)



100 mV/div, 5 msec/div

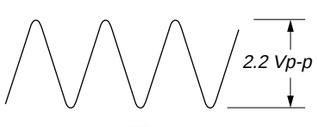
⑥ IC201 ⑩⑧ (XTAO)



1 V/div, 20 nsec/div

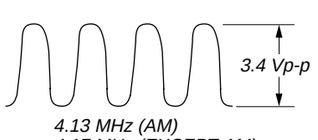
— MAIN Board —

① IC1 ⑳ (X OUT)



1 V/div, 5 µsec/div

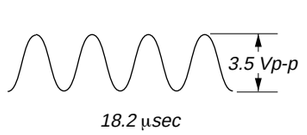
② IC801 ⑨② (X1)



1 V/div, 100 nsec/div

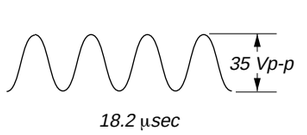
— TC Board — (REC)

① Q301 ⓒ



1 V/div, 10 µsec/div

② HRP301 (YEL)



10 V/div, 10 µsec/div

• NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

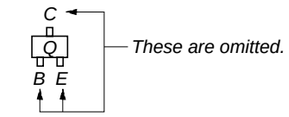
- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  – BD83S Board –
  no mark : CD PLAY
  – MAIN (1/3) Board –
  no mark : FM
  ( ) : AM
  – MAIN (2/3), (3/3) and Other Boards –
  no mark : FM
  ( ) : PB
  < > : REC
  [ ] : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : PB
  ⇨ : REC
  ⇨ : CD PLAY
- Abbreviation
  CND : Canadian model.
  CET : East European & Russian model.
  E41 : AC 230V area in E model.
  E92 : AC 120V area in E model.
  AUS : Australian model.
  KR : Korea model
  MX : Mexican model.
  SP : Singapore model.
  IT : Italian model.
  AR : Argentina model.
  TH : Thai model.
  TW : Taiwan model.

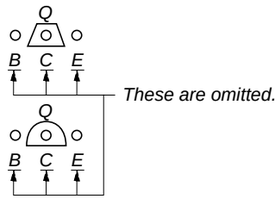
For printed wiring boards.

Note:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡← : indicates side identified with part number.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.





- Abbreviation
  CND : Canadian model.
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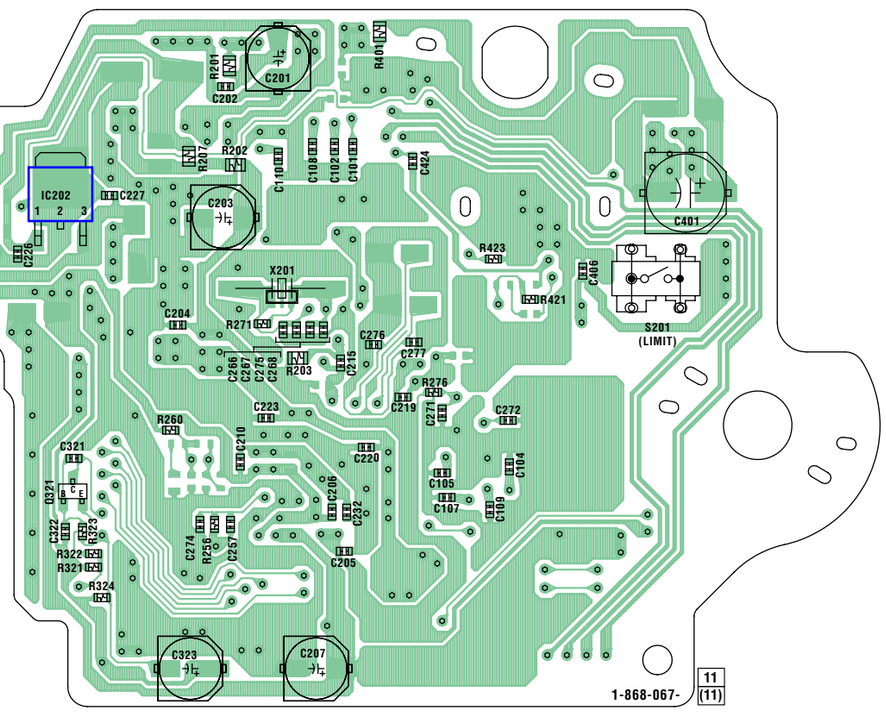
  E41 : AC 230V area in E model.
  E92 : AC 120V area in E model.
  AUS : Australian model.
  KR : Korea model
  MX : Mexican model.
  SP : Singapore model.
  IT : Italian model.
  AR : Argentina model.
  TH : Thai model.
  TW : Taiwan model.

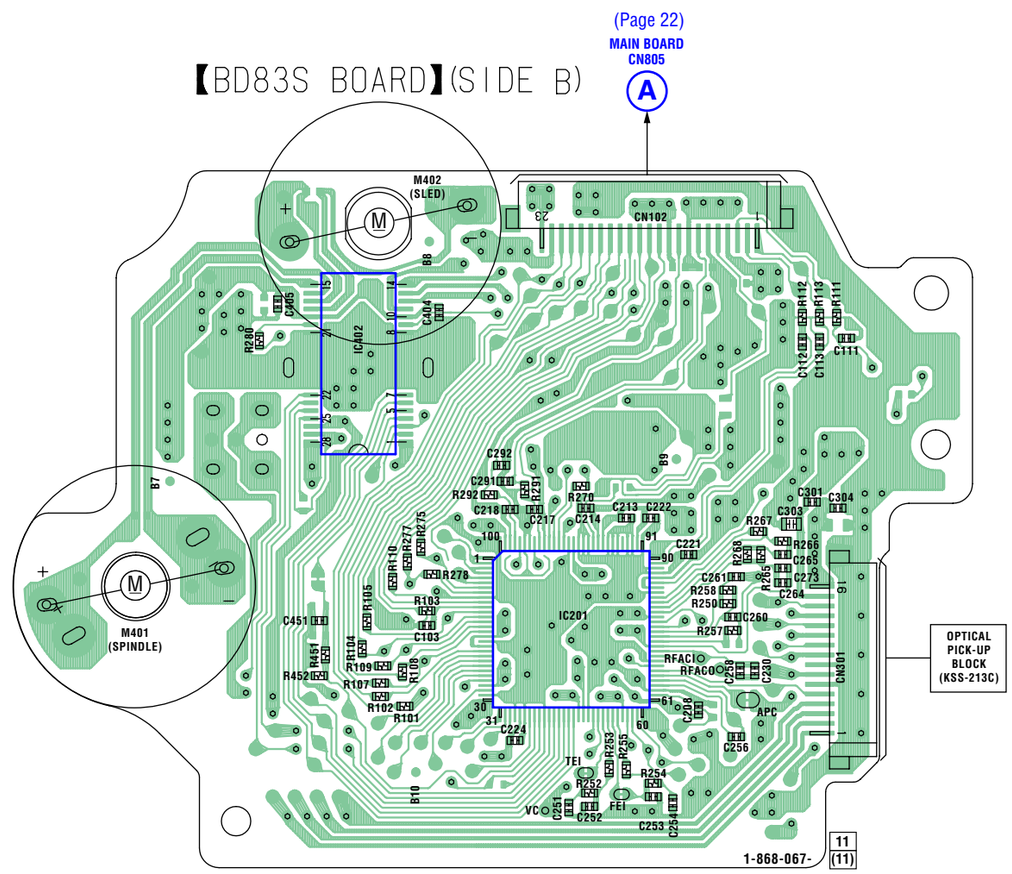
6-4. PRINTED WIRING BOARD — BD83S SECTION — • Refer to page 19 for Circuit Boards Location. : Uses unleaded solder.

【BD83S BOARD】(SIDE A)



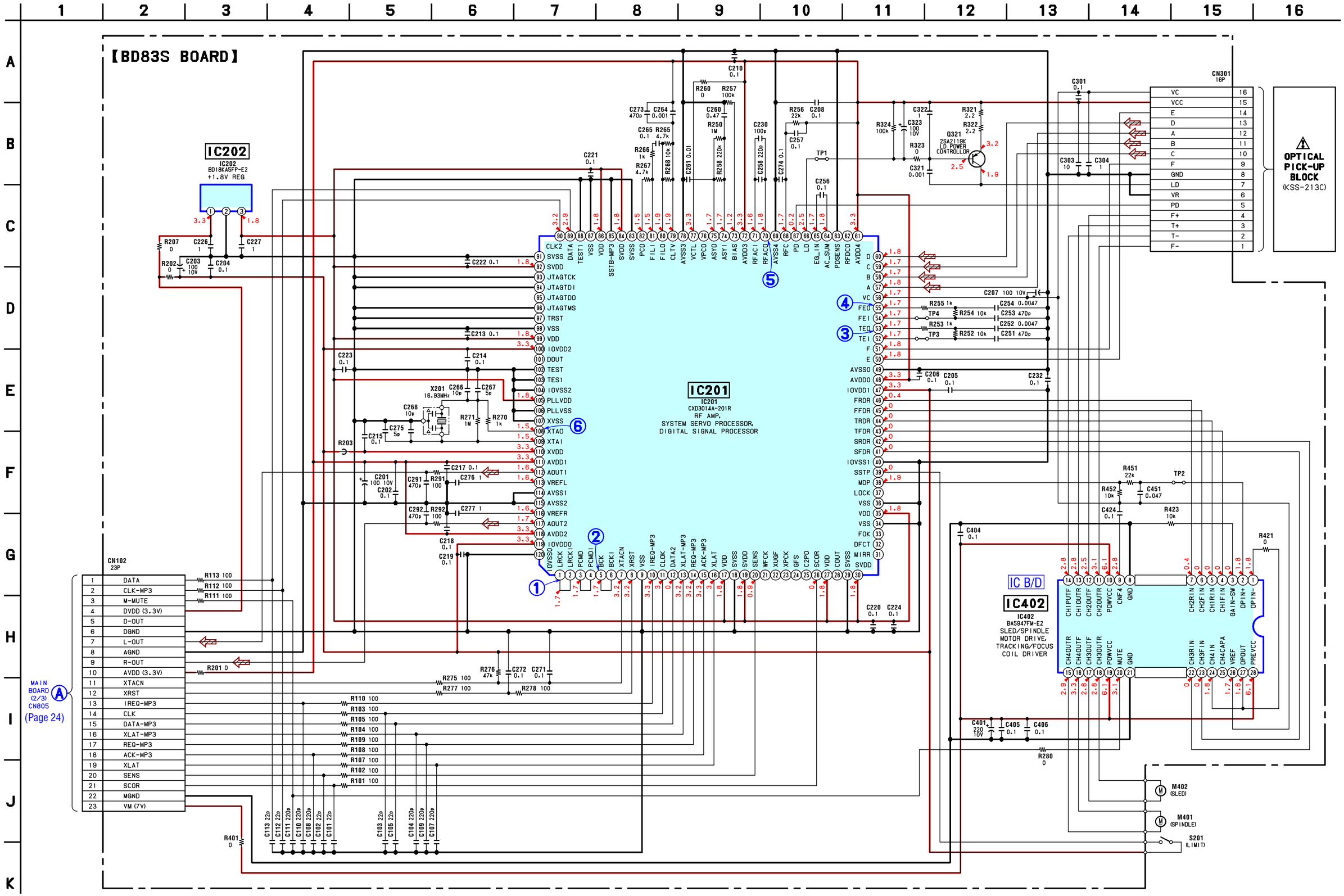
【BD83S BOARD】(SIDE B)

(Page 22)
MAIN BOARD
CN805
A



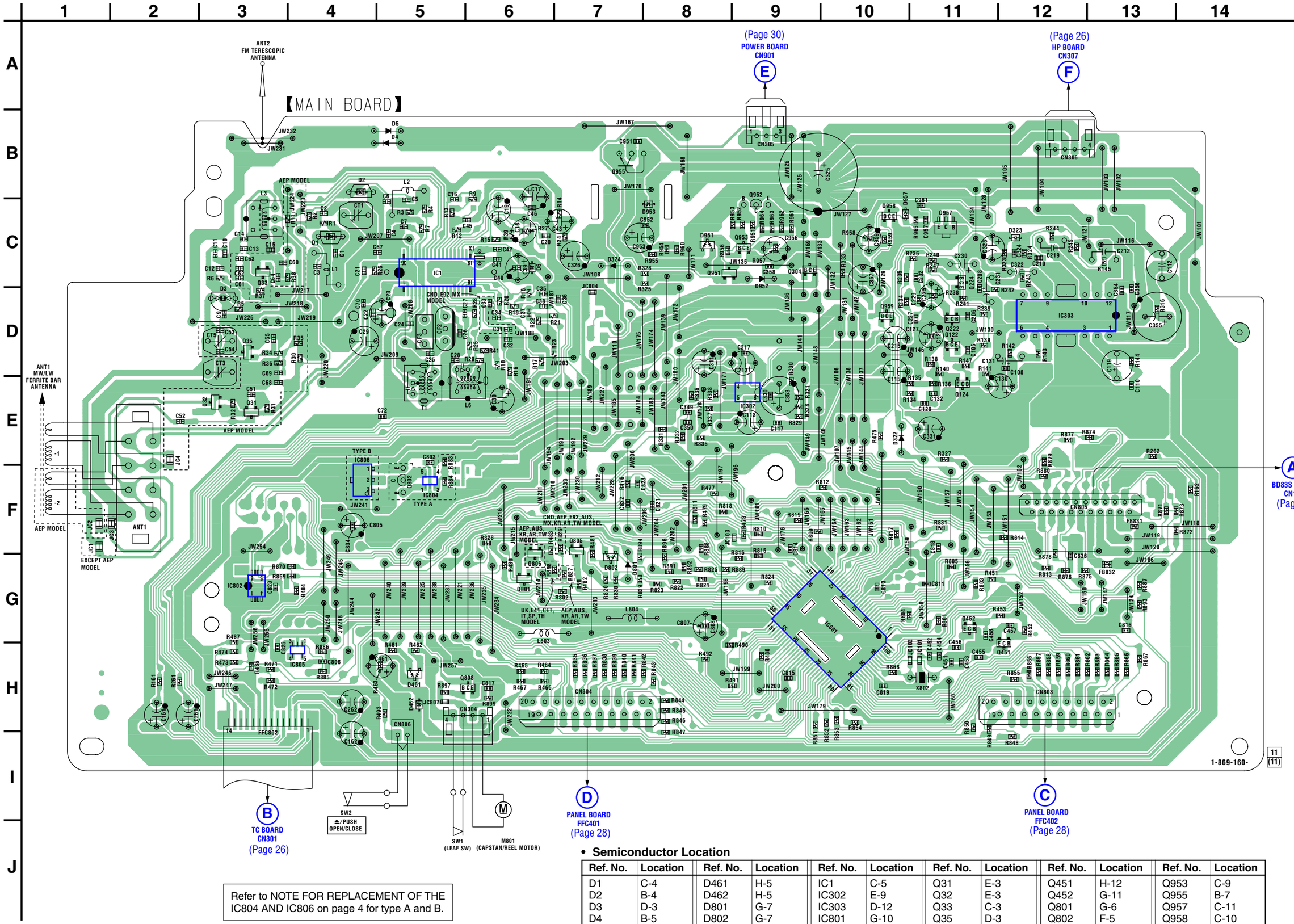
6-5. SCHEMATIC DIAGRAM — BD83S SECTION —

• Refer to page 19 for Waveforms. • Refer to page 32 for IC Block Diagram. • Refer to page 34 for IC Pin Description of IC201.



6-6. PRINTED WIRING BOARD — MAIN SECTION —

• Refer to page 19 for Circuit Boards Location. : Uses unleaded solder.

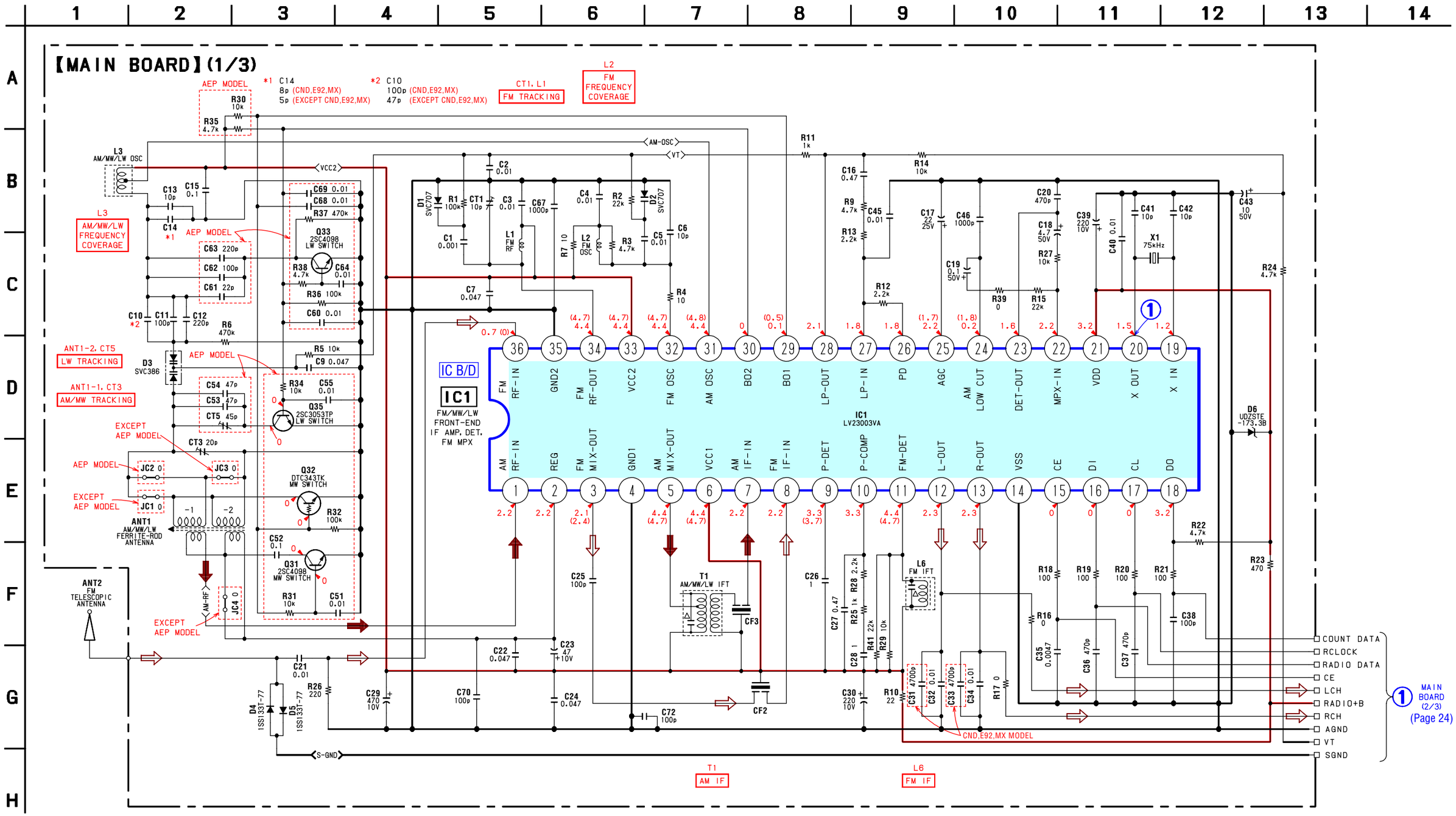


Refer to NOTE FOR REPLACEMENT OF THE IC804 AND IC806 on page 4 for type A and B.

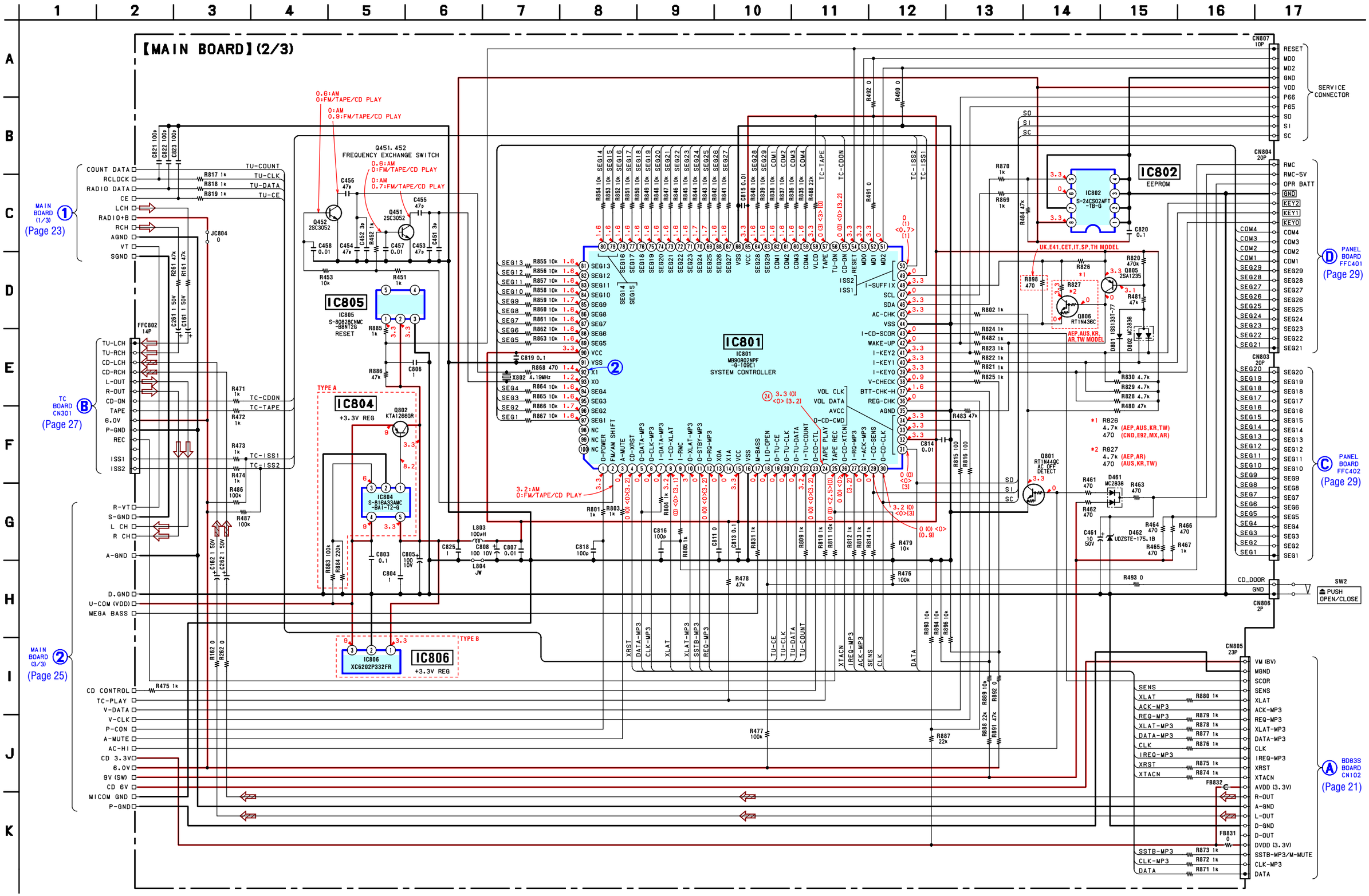
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1	C-4	D461	H-5	IC1	C-5	Q31	E-3	Q451	H-12	Q953	C-9
D2	B-4	D462	H-5	IC302	E-9	Q32	E-3	Q452	G-11	Q955	B-7
D3	D-3	D801	G-7	IC303	D-12	Q33	C-3	Q801	G-6	Q957	C-11
D4	B-5	D802	G-7	IC801	G-10	Q35	D-3	Q802	F-5	Q958	C-10
D5	B-5	D951	C-8	IC802	G-3	Q122	D-11	Q805	F-7	Q959	D-10
D6	C-6	D952	C-9	IC804	F-5	Q124	E-11	Q806	G-6		
D322	E-10	D953	C-8	IC805	H-4	Q222	D-11	Q808	H-6		
D323	C-12	D957	C-10	IC806	F-4	Q224	C-11	Q951	C-8		
D324	C-7					Q304	C-9	Q952	B-9		

6-7. SCHEMATIC DIAGRAM — MAIN SECTION (1/3) — • Refer to page 19 for Waveforms. • Refer to page 32 for IC Block Diagram.

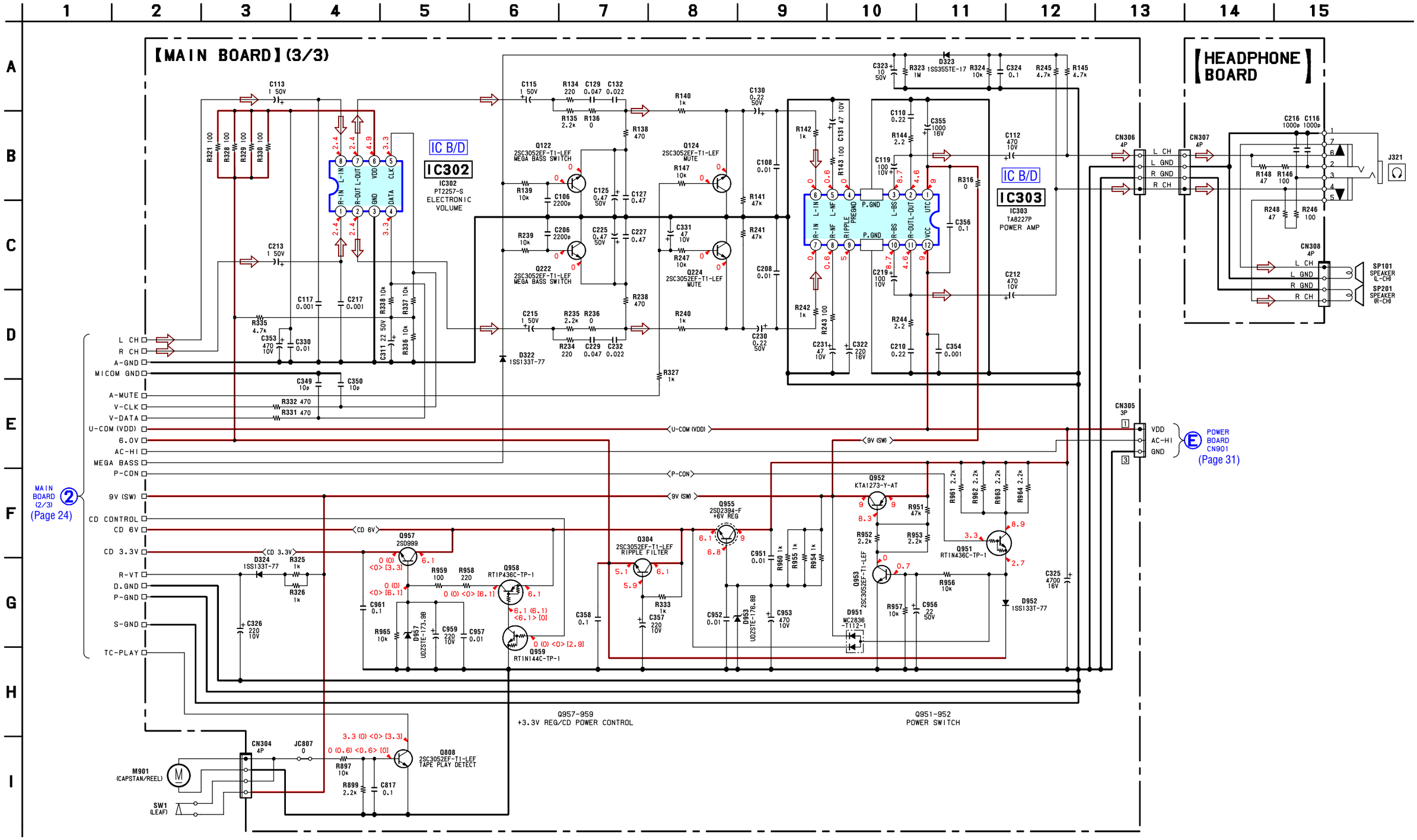


6-8. SCHEMATIC DIAGRAM — MAIN SECTION (2/3) — • Refer to page 19 for Waveforms. • Refer to page 37 for IC Pin Description of IC801.

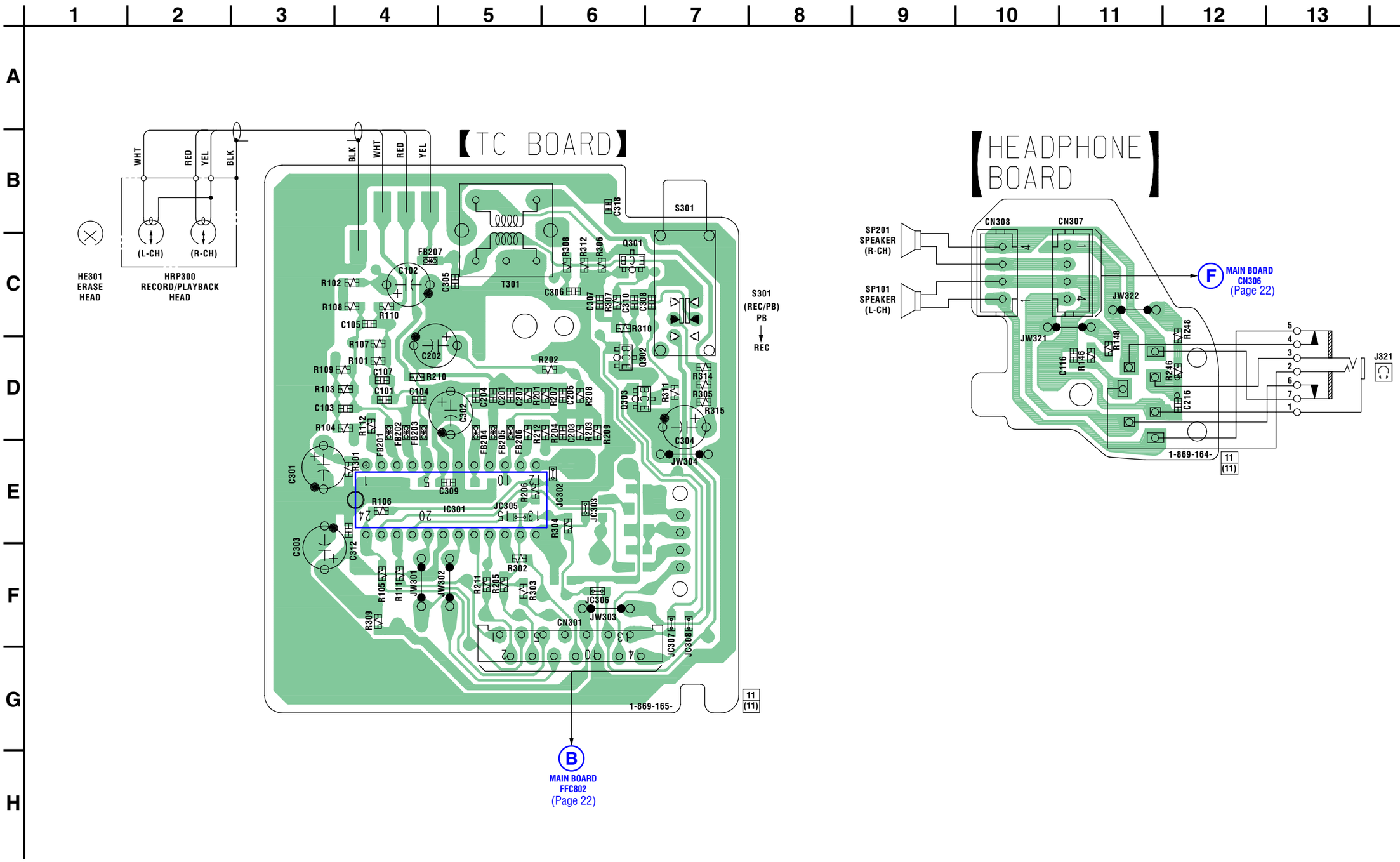


Refer to NOTE FOR REPLACEMENT OF THE IC804 AND IC806 on page 4 for type A and B.

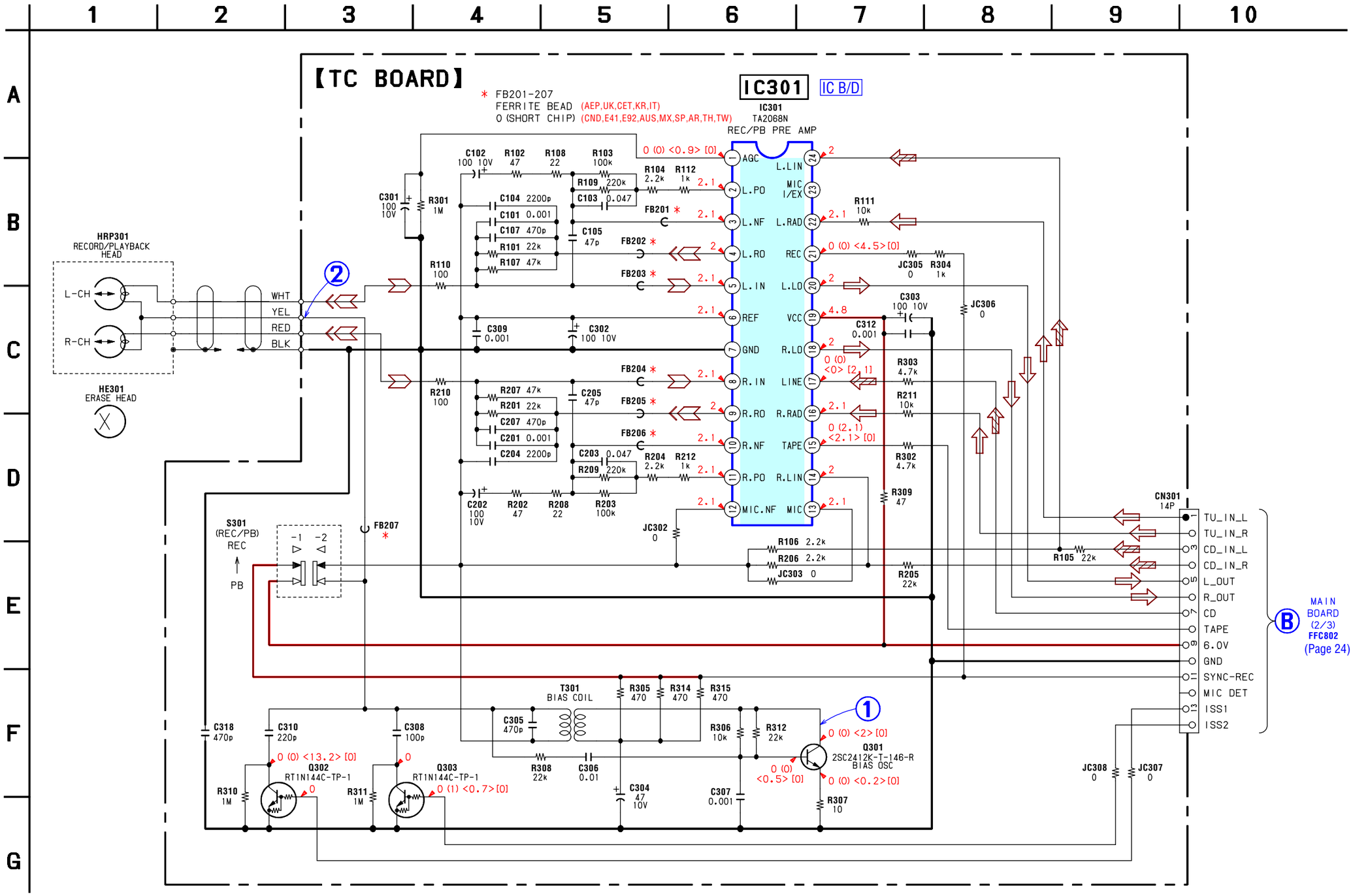
6-9. SCHEMATIC DIAGRAM — MAIN SECTION (3/3) — • Refer to page 32 for IC Block Diagrams.



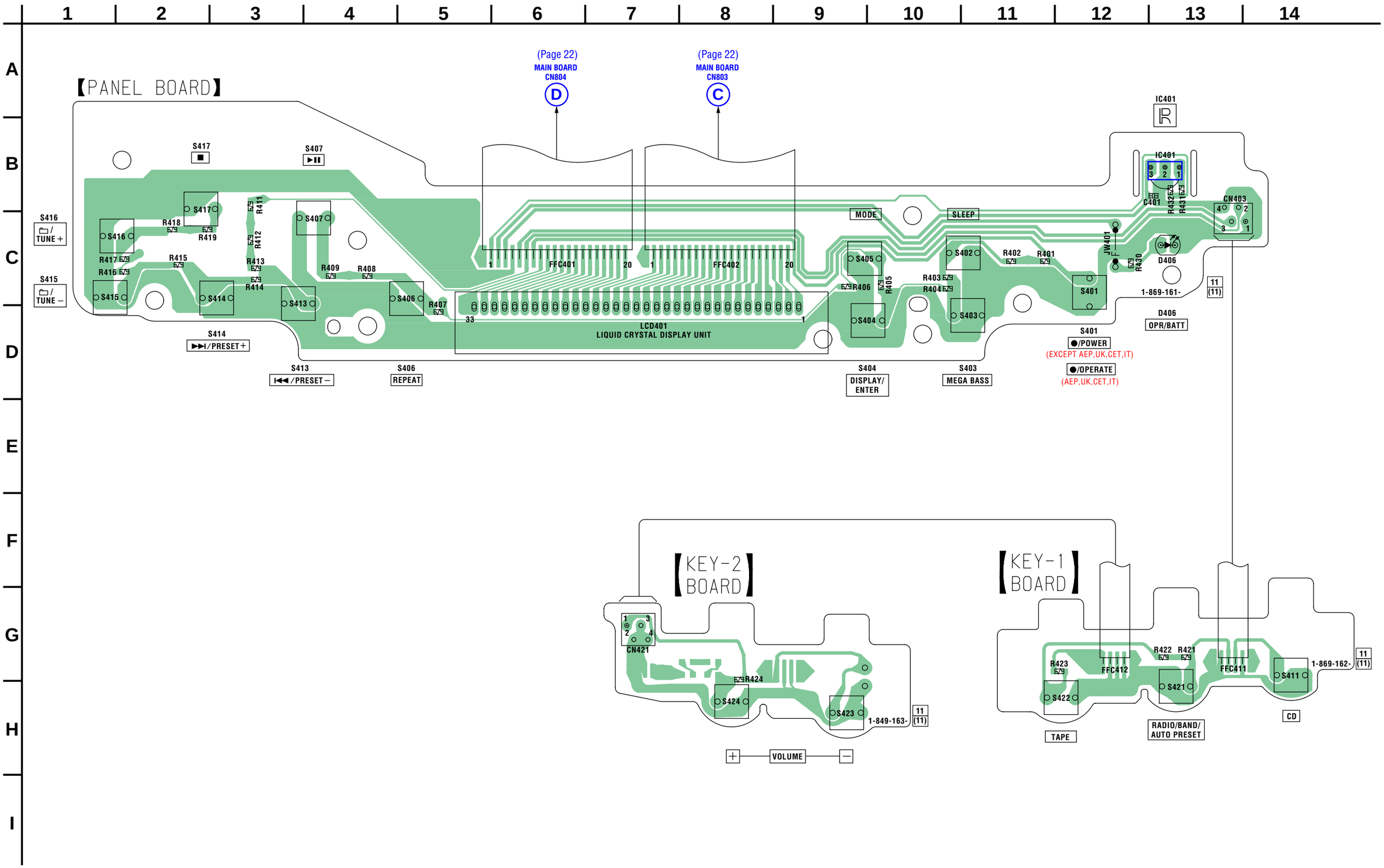
6-10. PRINTED WIRING BOARDS — TC SECTION — • Refer to page 19 for Circuit Boards Location. : Uses unleaded solder.



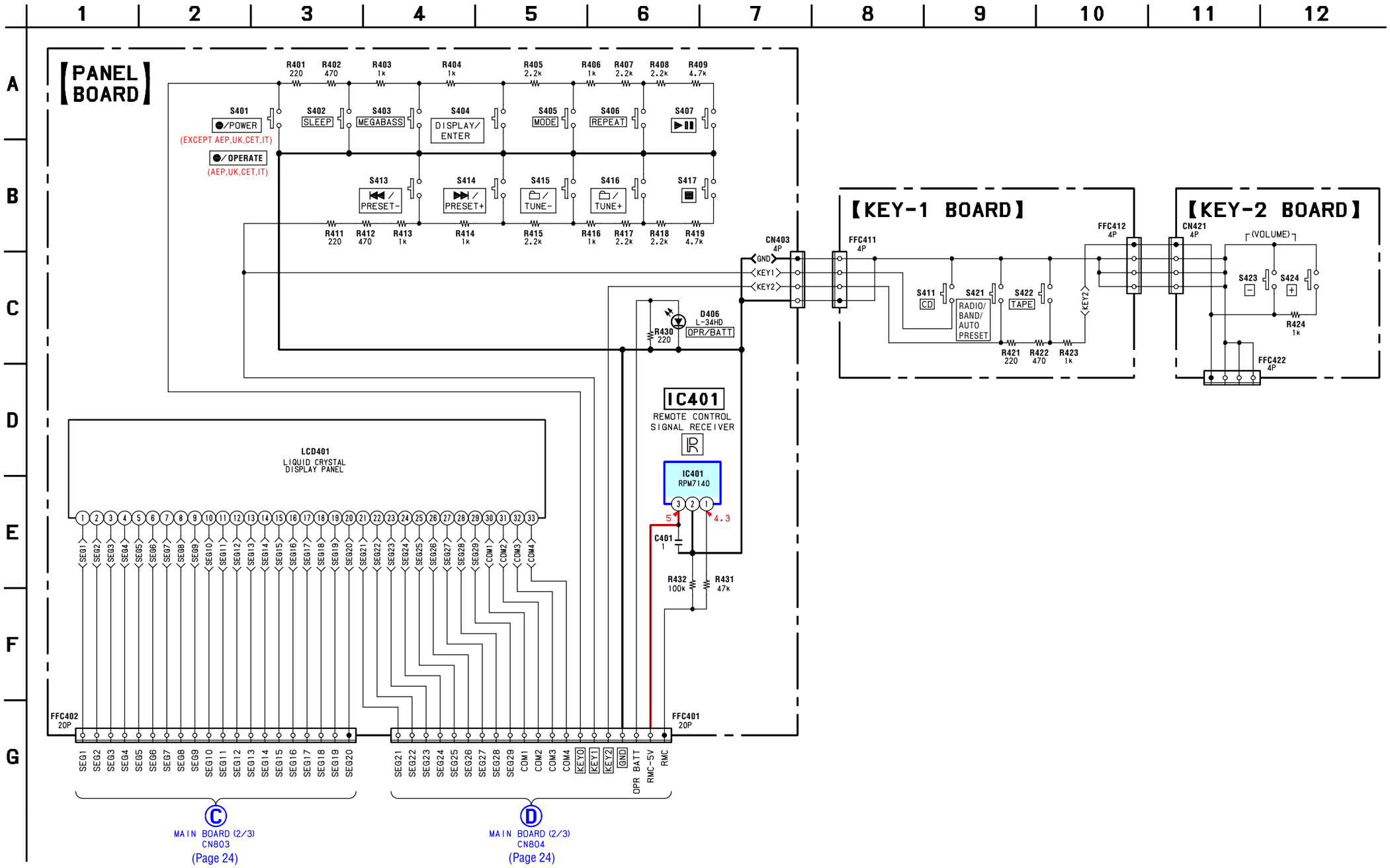
6-11. SCHEMATIC DIAGRAM — TC SECTION — • Refer to page 19 for Waveforms. • Refer to page 33 for IC Block Diagram.



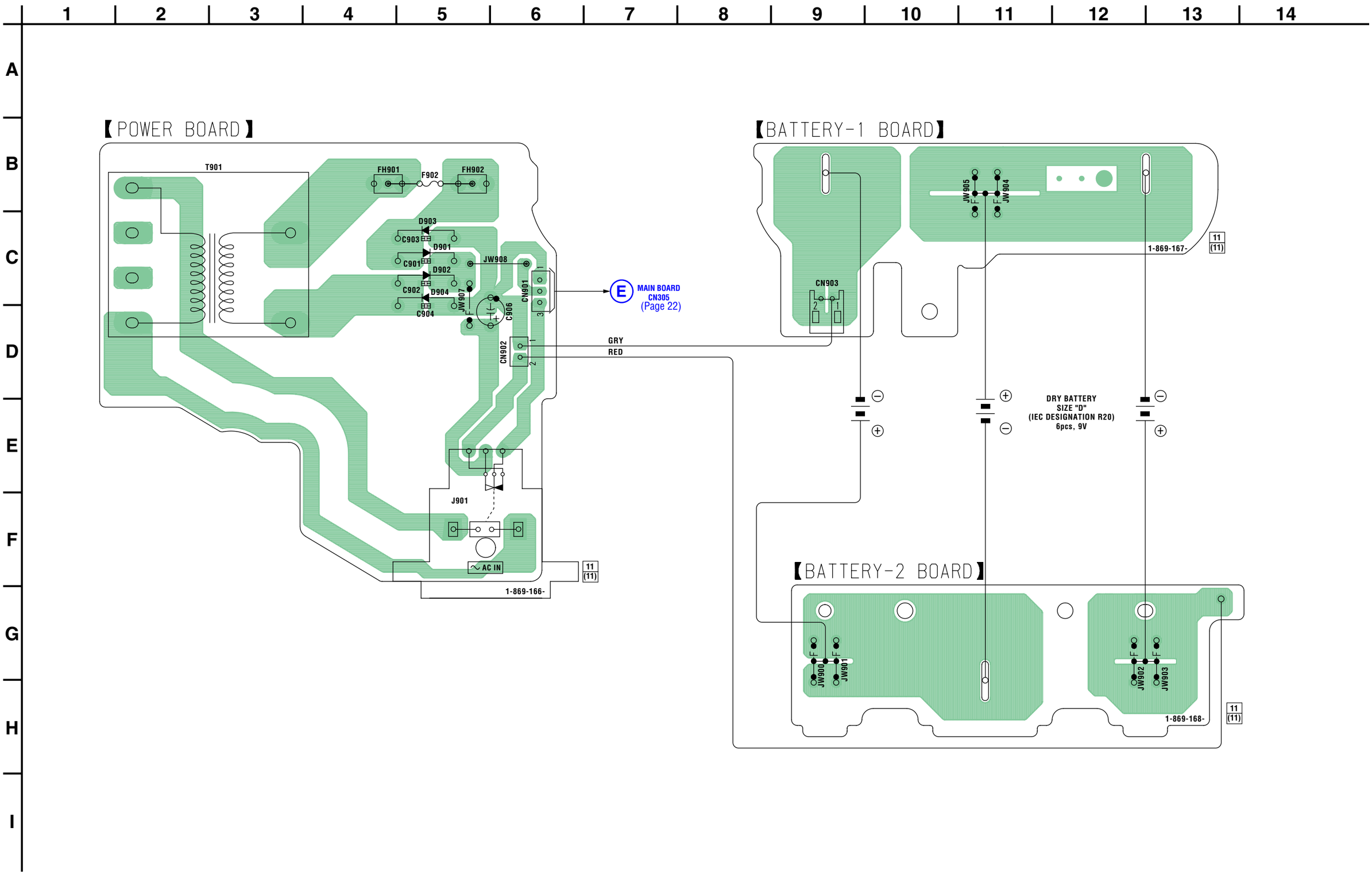
6-12. PRINTED WIRING BOARDS — PANEL SECTION — • Refer to page 19 for Circuit Boards Location. : Uses unleaded solder.



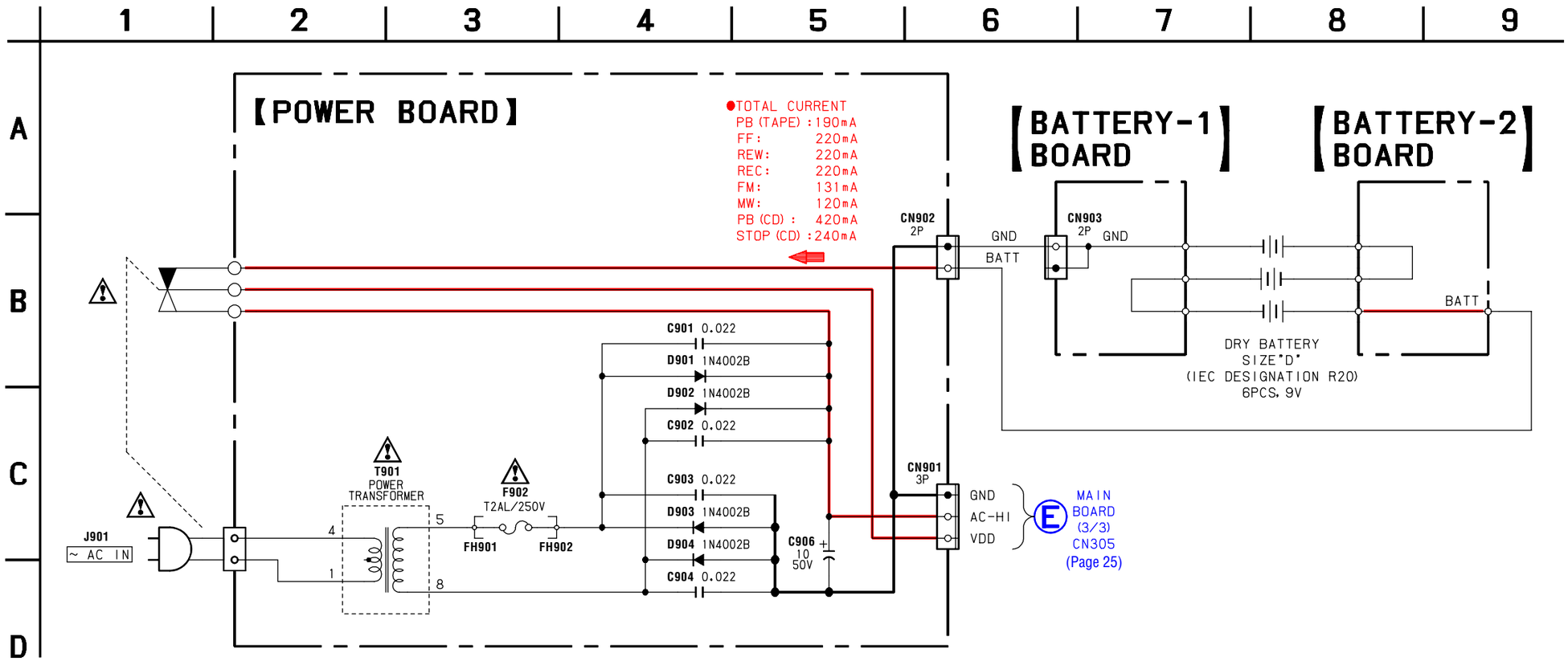
6-13. SCHEMATIC DIAGRAM — PANEL SECTION —



6-14. PRINTED WIRING BOARDS — POWER SUPPLY SECTION — • Refer to page 19 for Circuit Boards Location. : Uses unleaded solder.

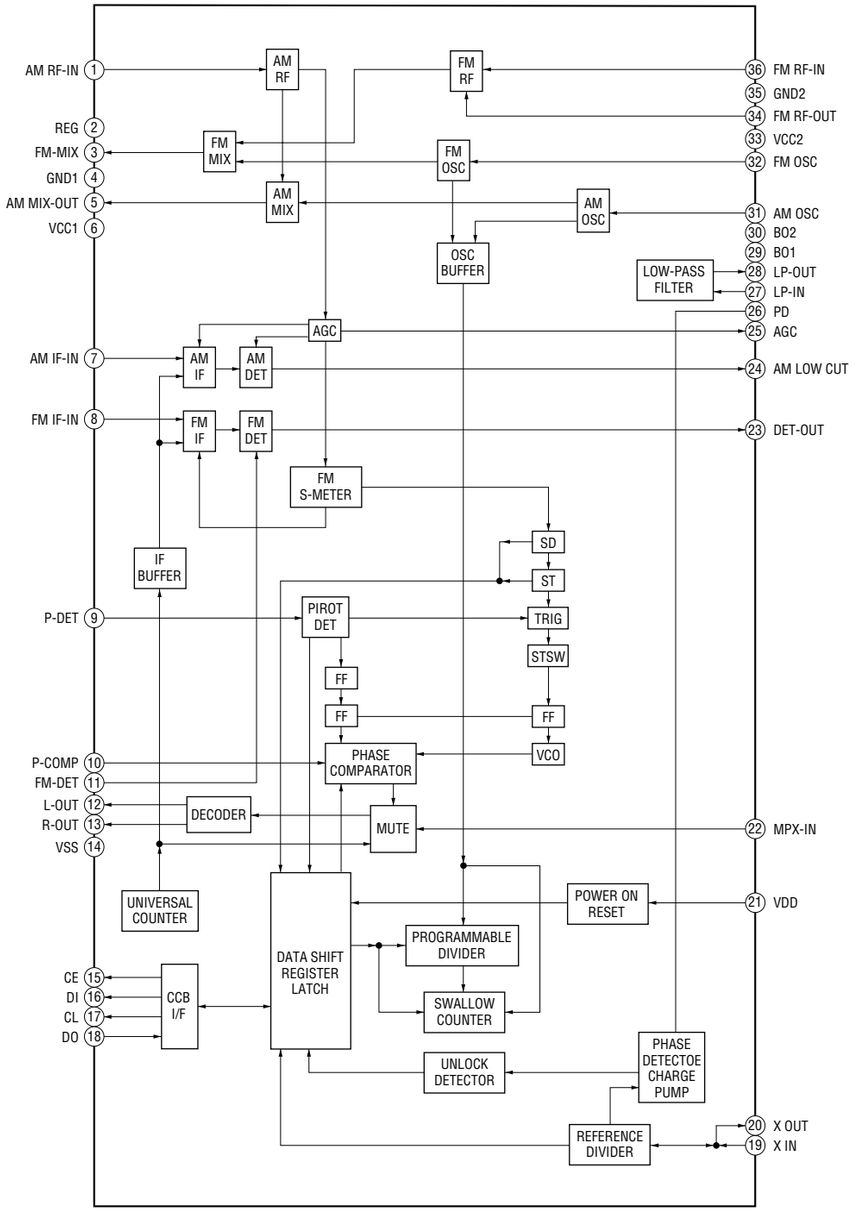


6-15. SCHEMATIC DIAGRAM — POWER SUPPLY SECTION —

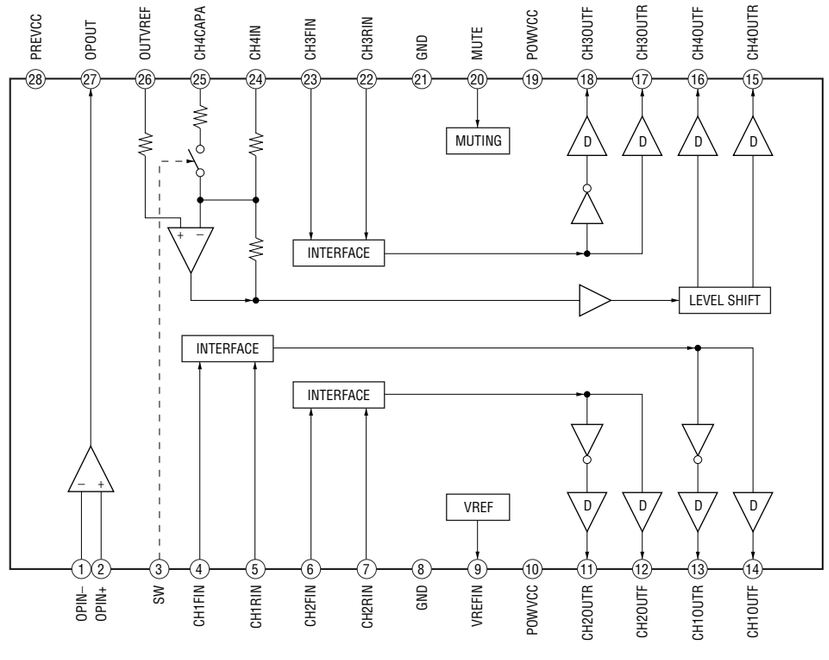


• IC BLOCK DIAGRAMS

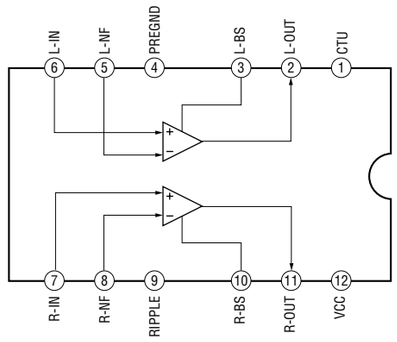
IC1 LV23003VA (MAIN Board (1/3))



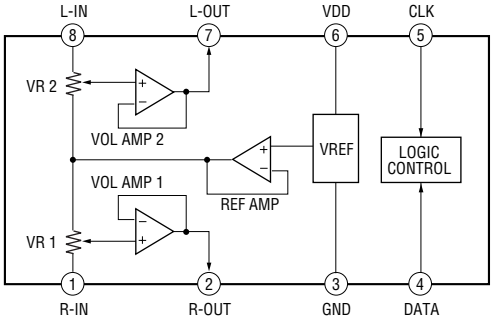
IC402 BA5947FM-E2 (BD83S Board)



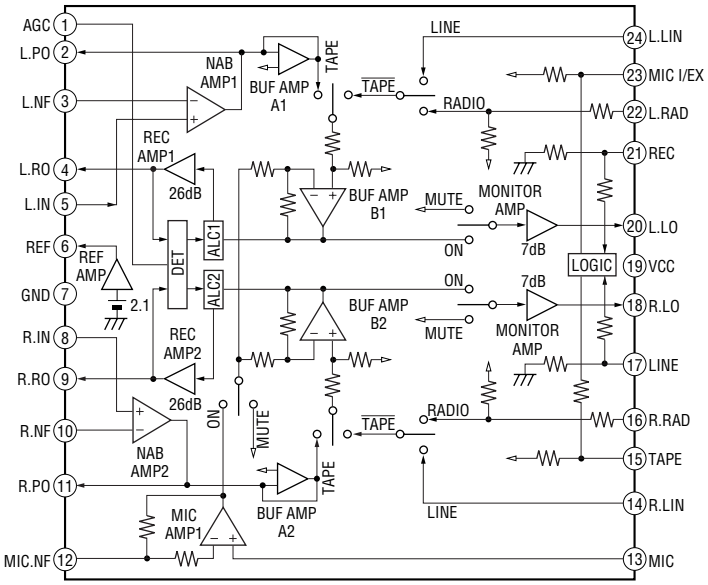
IC303 TA8227P (MAIN Board (3/3))



IC302 PT2257-S (MAIN Board (3/3))



IC301 TA2068N (TC Board)



• IC PIN DESCRIPTIONS

• IC201 CXD3014A-201R (RF AMP, SYSTEM SERVO PROCESSOR, DIGITAL SIGNAL PROCESSOR) (BD83S BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	LRCK	O	L/R sampling clock signal output terminal
2	LRCKI	I	L/R sampling clock signal input terminal
3	PCMD	O	Serial data output terminal
4	PCMDI	I	Serial data input terminal
5	BCK	O	Bit clock signal output terminal
6	BCKI	I	Bit clock signal input terminal
7	XTACN	I	Oscillation circuit on/off switch control signal input from the system controller "L": oscillation stop, "H": self-oscillation
8	XRST	I	System reset signal input from the system controller "L": reset
9	VSS	—	Ground terminal
10	IREQ-MP3	O	MP3 data request signal output to the system controller
11	CLOK	I	CD serial data transfer clock signal input from the system controller
12	DATA2	I	MP3 serial data input/output with the system controller
13	XLAT-MP3	I	MP3 serial data latch pulse signal input from the system controller
14	REQ-MP3	I	MP3 data request signal input from the system controller
15	ACK-MP3	O	MP3 acknowledge signal output to the system controller
16	XLAT	I	CD serial data latch pulse signal input from the system controller
17	VDD	—	Power supply terminal (+1.8V)
18	SVSS	—	Ground terminal
19	SVDD	—	Power supply terminal (+1.8V)
20	SENS	O	Internal status (SENSE) signal output to the system controller
21	WFCK	—	Not used
22	XUGF	—	Not used
23	XPCK	—	Not used
24	GFS	—	Not used
25	C2PO	—	Not used
26	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller
27	VDD	—	Power supply terminal (+1.8V)
28	COUT	—	Not used
29	SVSS	—	Ground terminal
30	SVDD	—	Power supply terminal (+1.8V)
31	MIRR	—	Not used
32	DFCT	—	Not used
33	FOK	—	Not used
34	VSS	—	Ground terminal
35	VDD	—	Power supply terminal (+1.8V)
36	VSS	—	Ground terminal
37	MIRR	—	Not used
38	MDP	O	Spindle motor servo control signal output terminal
39	SSTP	I	Disc inner position detection signal input terminal
40	IOVSS1	—	Ground terminal
41	SFDR	O	Sled servo drive signal (+) output to the coil/motor driver
42	SRDR	O	Sled servo drive signal (–) output to the coil/motor driver
43	TFDR	O	Tracking servo drive signal (+) output to the coil/motor driver
44	TRDR	O	Tracking servo drive signal (–) output to the coil/motor driver
45	FFDR	O	Focus servo drive signal (+) output to the coil/motor driver
46	FRDR	O	Focus servo drive signal (–) output to the coil/motor driver
47	IOVDD1	—	Power supply terminal (+3.3V)

Pin No.	Pin Name	I/O	Pin Description
48	AVDD0	—	Power supply terminal (+3.3V)
49	AVSS0	—	Ground terminal
50	E	I	E signal input from the optical pick-up block
51	F	I	F signal input from the optical pick-up block
52	TEI	I	Tracking error signal input terminal
53	TEO	O	Tracking error signal output terminal
54	FEI	I	Focus error signal input terminal
55	FEO	O	Focus error signal output terminal
56	VC	O	Middle point voltage output terminal
57	A	I	A signal input from the optical pick-up block
58	B	I	B signal input from the optical pick-up block
59	C	I	C signal input from the optical pick-up block
60	D	I	D signal input from the optical pick-up block
61	AVDD4	—	Power supply terminal (+3.3V)
62	RFDCO	O	Not used
63	PDSENS	I	Not used
64	AC_SUM	O	RFAC summing amplifier signal output terminal
65	EQ_IN	I	RF equalizer circuit input terminal
66	LD	O	Laser diode on/off control signal output to the automatic power control circuit “L”: laser off, “H”: laser on
67	PD	I	Light amount monitor input from the optical pick-up block laser diode
68	RFC	I	Equalizer cut off frequency adjustment terminal
69	AVSS4	—	Ground terminal
70	RFACO	O	EFM signal output terminal
71	RFACI	I	EFM signal input terminal
72	AVDD3	—	Power supply terminal (+3.3V)
73	BIAS	I	Asymmetry circuit constant current input terminal
74	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
75	ASYO	O	Playback EFM full-swing output terminal
76	VPCO	O	Charge pump output terminal for broad-band EFM PLL
77	VCTL	I	VCO2 control voltage input terminal for broad-band EFM PLL
78	AVSS3	—	Ground terminal
79	CLTV	I	VCO1 control voltage input terminal for multiplier
80	FILO	O	Filter output terminal for master PLL
81	FILI	I	Filter input terminal for master PLL
82	PCO	O	Charge pump output terminal for master PLL
83	SVSS	—	Ground terminal
84	SVDD	—	Power supply terminal (+1.8V)
85	SSTB-MP3	I	MP3 standby on/off control signal input terminal “L”: standby Not used
86	VDD	—	Power supply terminal (+1.8V)
87	VSS	—	Ground terminal
88	TEST1	I	Test terminal Normally: fixed at “L”
89	DATA	I	CD serial data input from the system controller
90	CLK2	I	MP3 serial data transfer clock signal input from the system controller
91	SVSS	—	Ground terminal
92	SVDD	—	Power supply terminal (+2.5V)
93	JTAGTCK	—	Not used
94	JTAGTDI	—	Not used
95	JTAGTDO	—	Not used
96	JTAGTMS	—	Not used

Pin No.	Pin Name	I/O	Pin Description
97	TRST	—	Not used
98	VSS	—	Ground terminal
99	VDD	—	Power supply terminal (+1.8V)
100	IOVDD2	—	Power supply terminal (+3.3V)
101	DOUT	O	Digital audio signal output terminal Not used
102	TEST	I	Test terminal Normally: fixed at “L”
103	TES1	I	Test terminal Normally: fixed at “L”
104	IOVSS2	—	Ground terminal
105	PLLVDD	—	Power supply terminal (+1.8V)
106	PLLVSS	—	Ground terminal
107	XVSS	—	Ground terminal
108	XTAO	O	System clock output terminal (16.9344 MHz)
109	XTAI	I	System clock input terminal (16.9344 MHz)
110	XVDD	—	Power supply terminal (+1.8V)
111	AVDD1	—	Power supply terminal (+3.3V)
112	AOUT1	O	L-ch analog audio signal output terminal
113	VREFL	O	L-ch reference voltage output terminal
114	AVSS1	—	Ground terminal
115	AVSS2	—	Ground terminal
116	VREFR	O	R-ch reference voltage output terminal
117	AOUT2	O	R-ch analog audio signal output terminal
118	AVDD1	—	Power supply terminal (+3.3V)
119	IOVDD0	—	Power supply terminal (+3.3V)
120	IOVSS0	—	Ground terminal

• IC801 MB90802NPF-G-109E1 (SYSTEM CONTROL) (MAIN BOARD (2/3))

Pin No.	Pin Name	I/O	Pin Description
1	O-POWER	O	System power control output H: Power ON
2	FM/AM SHIFT	O	system clock shift control signal output
3	A-MUTE	O	A-mute signal output H: mute on
4	CD-XRST	O	CD reset signal output
5	O-DATA-MP3	O	MP3 serial data output
6	O-CLK-MP3	O	MP3 serial transfer clock output
7	I-DATA-MP3	I	MP3 serial data input
8	I-CD-XLAT	I	CD LAT signal output
9	I-RMC	I	Remote commander receiver data input
10	O-XLAT-MP3	O	MP3 LAT signal output
11	O-STBY-MP3	O	CD mechanical mute signal output
12	O-RQ-MP3	O	MP3 chip select signal output
13	X0A	—	Not used (Open)
14	X1A	—	Not used (Open)
15	VCC	—	Power supply (+3.3 V)
16	VSS	—	Ground
17	M-BASS	O	MEGA BASS control signal output
18	LID-OPEN	I	CD door open/close switch input L: Close
19	O-TU-CE	O	Tuner PLL chip enable signal output
20	O-TU-CLK	O	Tuner PLL serial transfer clock output
21	O-TU-DATA	O	Tuner PLL serial data output
22	I-TU-COUNT	I	Tuner PLL serial data input
23	O-CD-CLT	O	CD power control signal output H: CD ON
24	TAPE PLAY	I	Tape play switch signal input
25	TAPE REC	I	Tape record switch signal input H: REC
26	O-CD-XTCN	O	CD DSP oscillation control signal output
27	I-RQ-MP3	I	MP3 REQ signal input
28	I-ACK-MP3	I	MP3 acknowledgment detect signal input
29	I-CD-SENS	I	CD SENS signal input
30	O-CD-CLK	O	CD command transfer clock output
31	O-CD-CMD	O	CD command data output
32	AVCC	—	Power supply (+3.3 V)
33	VOL DATA	O	Volume command serial data output
34	VOL CLK	O	Volume command serial transfer clock output
35	AGND	—	Ground
36	REQ-CHK	I	Power supply CD 3.3V check signal input
37	BTT-CHK-H	I	Power supply 9V check signal input
38	V-CHECK	I	Power supply 6V check signal input
39	I-KEY0	I	Key input
40	I-KEY1	I	Key input
41	I-KET2	I	Key input
42	WAKE-UP	I	Key wake-up signal input
43	I-CD-SCOR	I	CD Q-data request signal input
44	VSS	—	Ground
45	AC-CHK	I	AC IN check signal input
46	SDA	I/O	EEPROM serial data input/output
47	SCL	O	EEPROM transfer clock output
48	I-SUFFIX	I	Suffix distinction input
49	ISS1	O	ISS control signal output

Pin No.	Pin Name	I/O	Pin Description
50	ISS2	O	ISS control signal output
51	MD2	I	Operation mode setting pin
52	MD1	I	Operation mode setting pin
53	MD0	I	Operation mode setting pin
54	RESET	I	System reset signal input
55	CD-ON	O	Audio CD mode control signal output
56	TU-ON	—	Not used (Open)
57	TAPE	O	Audio tape mode control signal output
58	VLCD	—	Not used (Open)
59 to 62	COM4 to 4	O	LCD drive common signal output
63	SEG29	O	LCD drive segment signal output
64	SEG28	O	LCD drive segment signal output
65	VCC	—	Power supply (+3.3 V)
66	VSS	—	Ground
67 to 89	SEG27 to 5	O	LCD drive segment signal output
90	VCC	—	Power supply (+3.3 V)
91	VSS	—	Ground
92	X1	O	Main system oscillation output (4.19 MHz)
93	X0	I	Main system oscillation input (4.19 MHz)
94 to 97	SEG4 to 1	O	LCD drive segment signal output
99 to 100	NC	—	Not used (Open)

SECTION 7
EXPLODED VIEWS

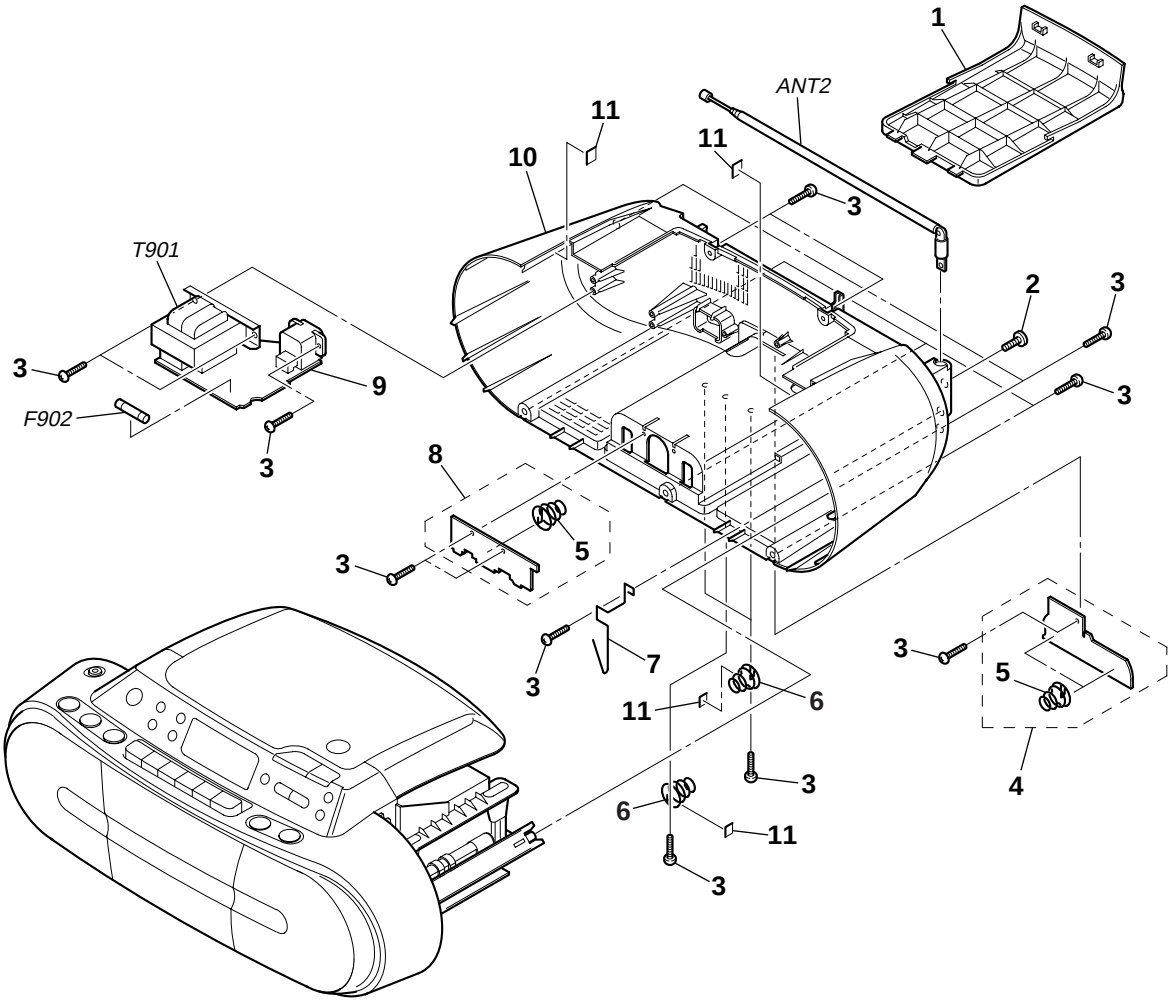
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  CET : East European & Russian model
  E41 : AC 230V area in E model
  E92 : AC 120V area in E model
  AUS : Australian model
  KR : Korea model
  MX : Mexican model
  SP : Singapore model
  IT : Italian model
  AR : Argentina model
  TH : Thai model
  TW : Taiwan model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

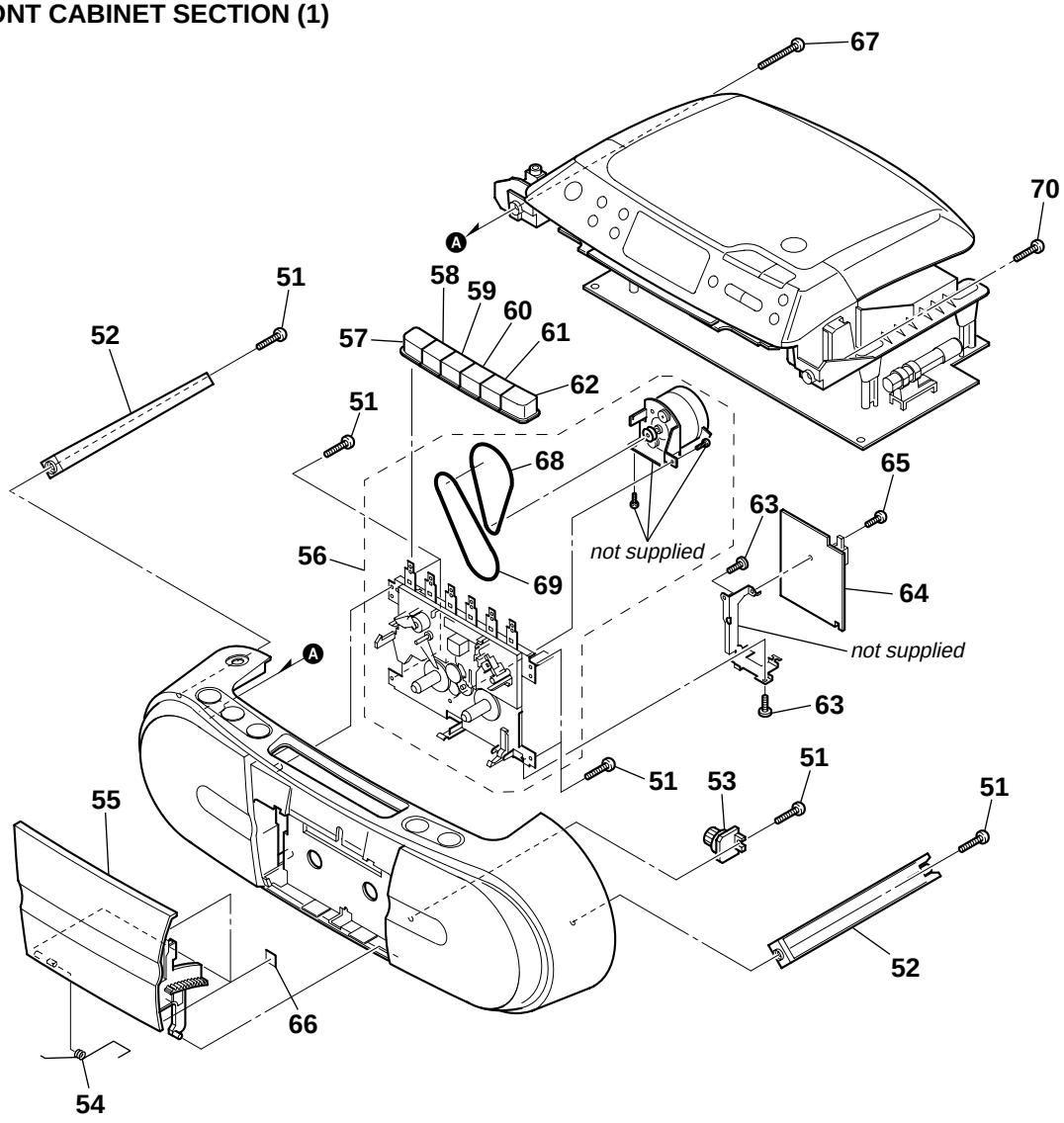
7-1. REAR CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	2-654-054-01	LID, BATTERY (GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
1	2-654-054-11	LID, BATTERY (LIGHT GRAY)...(SILVER) (AEP,UK,CET,IT)	
2	3-252-833-01	SCREW (M3), (+) P	
3	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
4	A-1157-013-A	BATTERY-1 BOARD, COMPLETE	
5	3-229-975-01	SPRING, BATTERY (–)	
6	3-252-540-01	SPRING (+.–), BATTERY	
7	2-654-073-01	TERMINAL, ANTENNA	
8	A-1157-012-A	BATTERY-2 BOARD, COMPLETE	

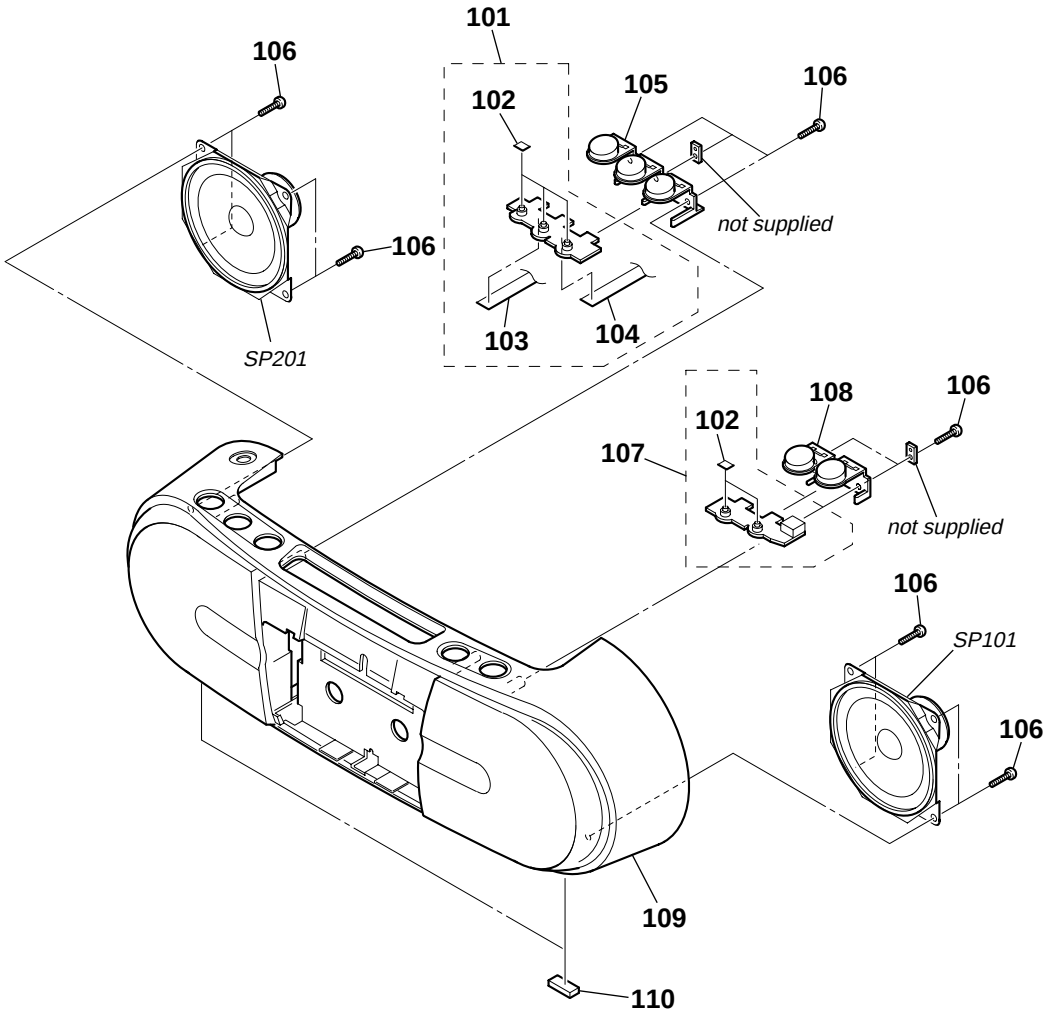
Ref. No.	Part No.	Description	Remark
9	A-1157-015-A	POWER BOARD, COMPLETE (E92,MX)	
9	A-1157-362-A	POWER BOARD, COMPLETE (EXCEPT CND,E92,MX,TW)	
9	A-1157-370-A	POWER BOARD, COMPLETE (CND)	
9	A-1157-380-A	POWER BOARD, COMPLETE (TW)	
10	2-654-040-02	CABINET (REAR) (GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
10	2-654-040-32	CABINET (REAR) (LIGHT GRAY)...(SILVER) (AEP,UK,CET,IT)	
11	3-831-441-99	SHEET (1)	
ANT2	1-754-376-11	ANTENNA, TELESCOPIC (FM)	
⚠F902	1-533-468-12	FUSE, GLASS TUBE (DIA. 5) (T2AL/250V)	
⚠T901	1-443-861-11	TRANSFORMER, POWER (EXCEPT CND,E92,MX,TW)	
⚠T901	1-443-871-11	TRANSFORMER, POWER (CND,E92,MX,TW)	

7-2. FRONT CABINET SECTION (1)



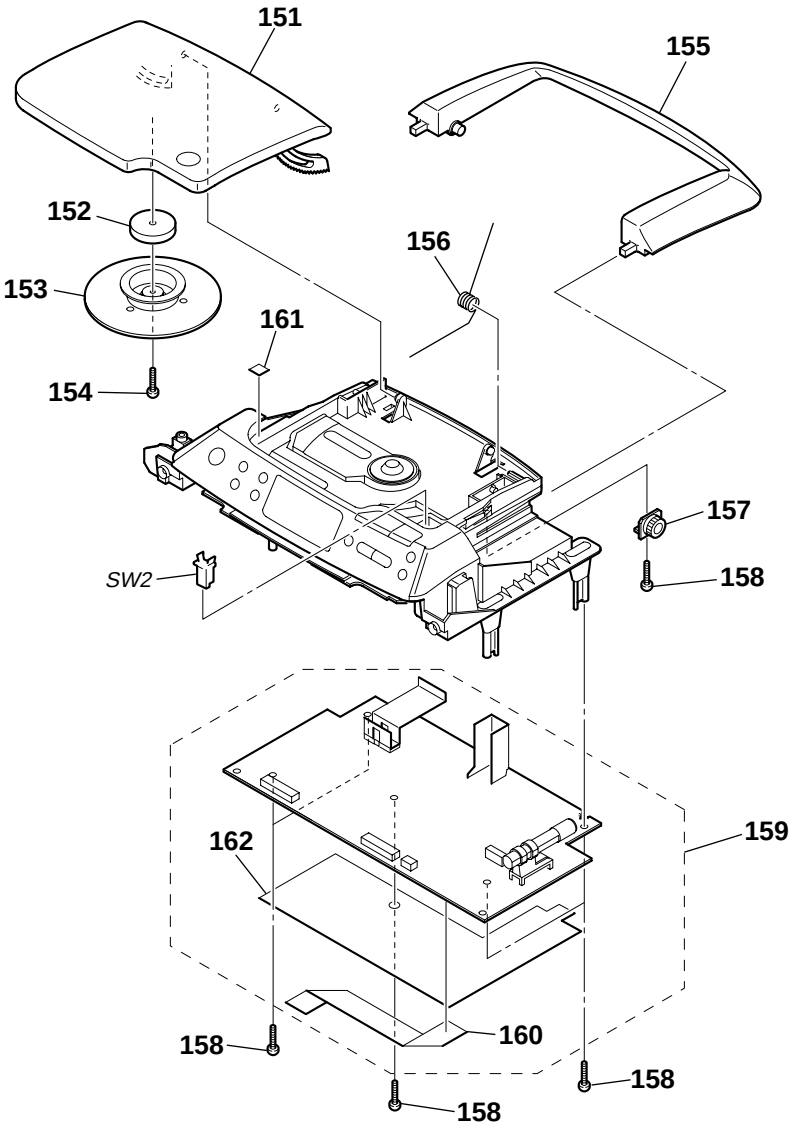
Ref. No.	Part No.	Description	Remark
51	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
52	2-655-159-01	JOINT, CABINET	
53	3-047-468-01	DAMPER	
54	2-654-071-01	SPRING, CASSETTE	
55	X-2103-302-2	HOLDER SUB ASSY, CASSETTE (BLUE)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
55	X-2103-333-2	HOLDER SUB ASSY, CASSETTE (GRAY)...(SILVER) (UK,CET,IT)	
55	X-2103-334-1	HOLDER SUB ASSY, CASSETTE (GRAY)...(SILVER) (AEP)	
56	1-797-376-11	DECK, MECHANICAL (including M901)	
57	2-654-047-01	BUTTON (PAUSE) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
57	2-654-047-11	BUTTON (PAUSE) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
58	2-654-046-01	BUTTON (STOP) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
58	2-654-046-11	BUTTON (STOP) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
59	2-654-045-01	BUTTON (REW) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
59	2-654-045-11	BUTTON (REW) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
60	2-654-044-01	BUTTON (FF) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
60	2-654-044-11	BUTTON (FF) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
61	2-654-042-01	BUTTON (PLAY) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
61	2-654-042-11	BUTTON (PLAY) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
62	2-654-043-01	BUTTON (REC) (LIGHT GRAY)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
62	2-654-043-11	BUTTON (REC) (GRAY)...(SILVER) (AEP,UK,CET,IT)	
63	3-254-029-01	SCREW	
64	A-1156-999-A	TC BOARD, COMPLETE (AEP,UK,CET,IT,KR)	
64	A-1158-597-A	TC BOARD, COMPLETE (CND,E41,E92,AUS,MX,SP,AR,TH,TW)	
65	3-253-143-01	SCREW (B2.6), (+) P TAPPING	
66	3-923-151-01	CUSHION, RUBBER	
67	3-254-141-01	SCREW (B2.6), (+) BV TAPPING	
68	2-670-389-01	BELT (1)	
69	2-670-390-01	BELT (2)	
70	3-254-140-01	SCREW (B2.6), (+) BV TAPPING	

7-3. FRONT CABINET SECTION (2)



Ref. No.	Part No.	Description	Remark
101	A-1157-000-A	KEY-1 BOARD, COMPLETE	
102	3-831-441-99	SHEET (1)	
103	1-831-616-11	CABLE, FLEXIBLE FLAT (4 CORE)	
104	1-831-613-11	CABLE, FLEXIBLE FLAT (4 CORE)	
105	2-654-050-01	BUTTON (FUNC)	
106	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
107	A-1157-002-A	KEY-2 BOARD, COMPLETE	
108	2-654-051-01	BUTTON (VOLUME) (GRAY)...(GRAY) (CND,E41,E92,MX,AR)	
108	2-654-051-11	BUTTON (VOLUME) (LIGHT GRAY)...(SILVER) (EXCEPT CND,E41,E92,MX,AR,TW)	
109	X-2102-579-1	CABINET (FRONT) SUB ASSY (GUNMETALLIC)...(GRAY) (CND)	
109	X-2103-199-1	CABINET (FRONT) SUB ASSY (SILVER)...(SILVER) (AEP,UK,CET,IT)	
109	X-2103-301-1	CABINET (FRONT) SUB ASSY (GUNMETALLIC)...(GRAY) (E41,E92,MX,AR)	
109	X-2103-331-1	CABINET (FRONT) SUB ASSY (SILVER)...(SILVER) (AUS,KR,SP,TH,TW,CET)	
110	3-040-916-01	FOOT (FRONT), RUBBER	
SP101	1-826-280-11	SPEAKER (7.7cm) (L-CH)	
SP201	1-826-280-11	SPEAKER (7.7cm) (R-CH)	

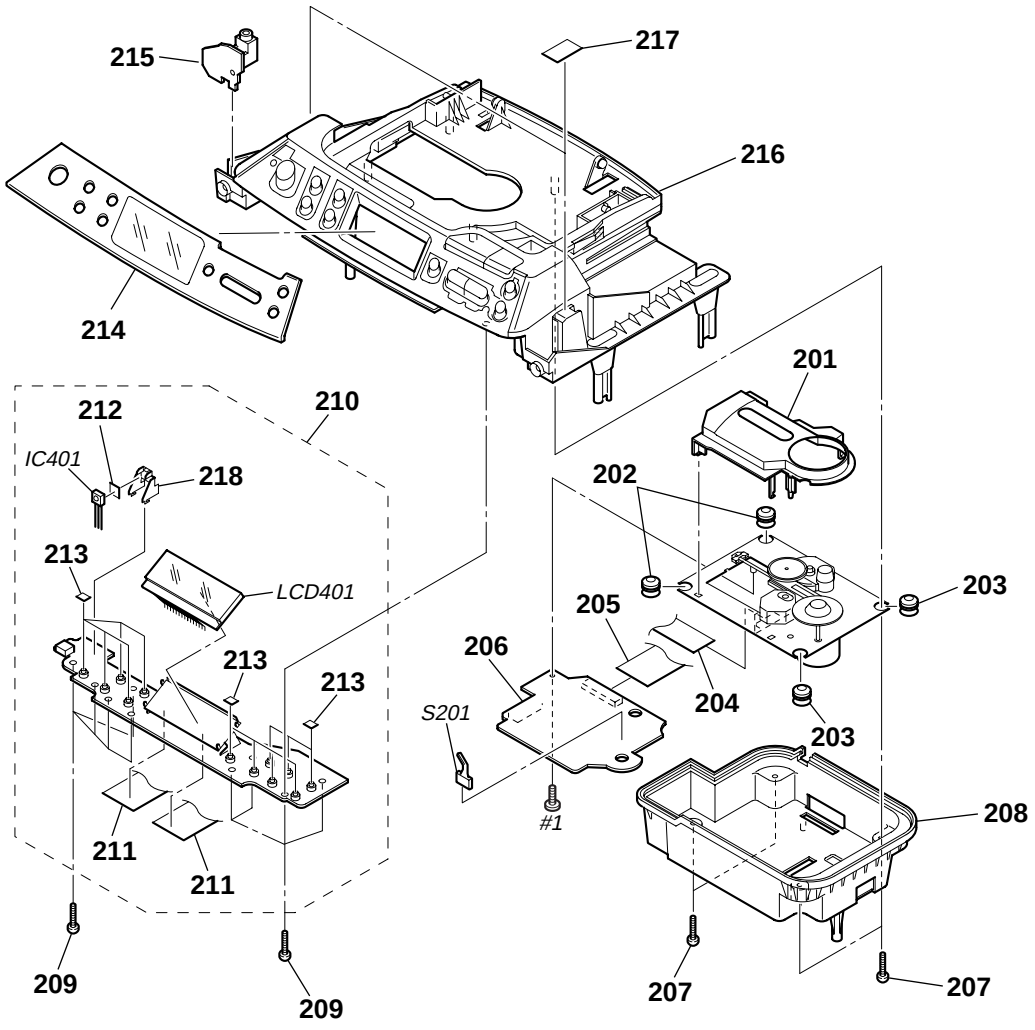
7-4. UPPER CABINET SECTION (1)



Ref. No.	Part No.	Description	Remark
151	2-654-053-21	LID, CD (GRAY)...(SILVER) (AEP,UK,CET,IT)	
151	2-654-053-31	LID, CD (BLUE)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
152	1-452-899-11	MAGNET	
153	3-019-395-01	PLATE, CHUCKING	
154	3-253-143-01	SCREW (B2.6), (+) P TAPPING	
155	2-654-056-01	HANDLE (BLUE)...(GRAY,SILVER) (CND.E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
155	2-654-056-11	HANDLE (GRAY)...(SILVER) (AEP,UK,CET,IT)	
156	2-654-072-01	SPRING, CD	
157	3-047-468-21	DAMPER	
158	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	

Ref. No.	Part No.	Description	Remark
159	A-1157-008-A	MAIN BOARD, COMPLETE (CND,E92,MX)	
159	A-1157-365-A	MAIN BOARD, COMPLETE (E41,SP,TH)	
159	A-1157-386-A	MAIN BOARD, COMPLETE (UK,CET,IT)	
159	A-1157-391-A	MAIN BOARD, COMPLETE (AEP)	
159	A-1157-967-A	MAIN BOARD, COMPLETE (AUS,KR,TW)	
159	A-1157-973-A	MAIN BOARD, COMPLETE (AR)	
160	1-832-008-11	CABLE, FLEXIBLE FLAT (14 CORE)	
161	3-923-151-01	CUSHION, RUBBER	
162	2-674-958-01	PAPER (MAIN), SHIELD	
SW2	1-692-960-21	SWITCH, PUSH (1 KEY)	(⏏ PUSH OPEN/CLOSE)

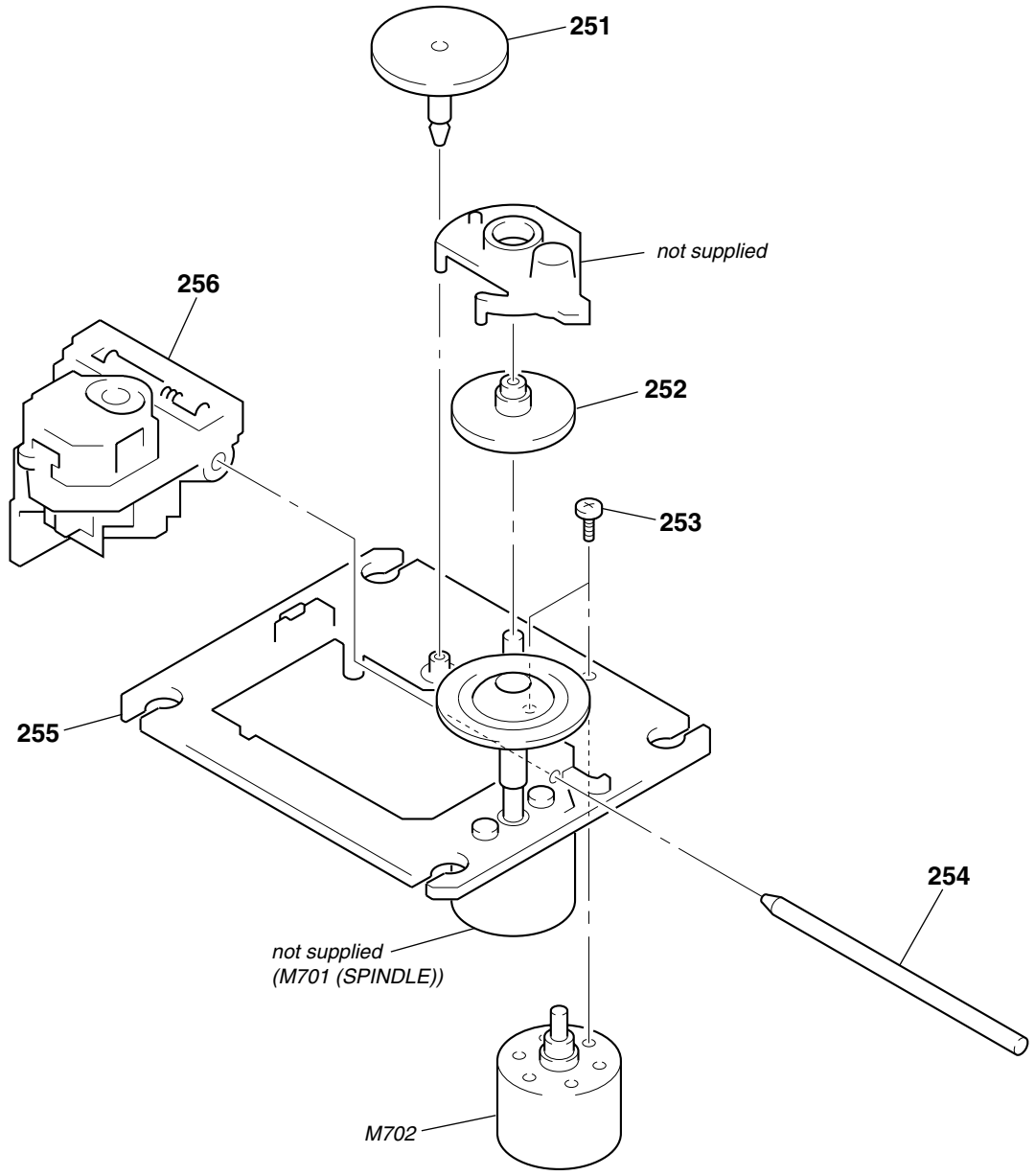
7-5. UPPER CABINET SECTION (2)



Ref. No.	Part No.	Description	Remark
201	3-923-736-01	COVER, CD	
202	3-931-379-21	RUBBER, VIBRATION PROOF (RED)	
203	3-931-379-31	RUBBER, VIBRATION PROOF (GREEN)	
204	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
205	1-831-973-11	CABLE, FLEXIBLE FLAT (23 CORE)	
206	A-1134-279-A	BD83S BOARD, COMPLETE	
207	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
208	2-654-055-21	CHASSIS, CD	
209	3-254-151-01	SCREW (B2.6), (+) P TAPPING	
210	A-1157-006-A	PANEL BOARD, COMPLETE	
211	1-832-009-11	CABLE, FLEXIBLE FLAT (20 CORE)	
212	2-673-399-01	SHEET (IR), ADHESIVE	
213	3-831-441-99	SHEET (1)	
214	2-654-058-01	WINDOW, LCD (CLEAR)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW)	
214	2-654-058-12	WINDOW, LCD (GLASS)...(SILVER) (AEP,UK,CET,IT)	
214	2-654-058-21	WINDOW, LCD (CLEAR)...(SILVER) (CET)	

Ref. No.	Part No.	Description	Remark
215	A-1154-900-A	HEADPHONE BOARD, COMPLETE	
216	X-2103-303-2	CABINET (UPPER) SUB ASSY (BLUE)...(GRAY,SILVER) (CND,E41,E92,AUS,KR,MX,SP,AR,TH,TW,CET)	
216	X-2103-332-2	CABINET (UPPER) SUB ASSY (GRAY)...(SILVER) (AEP,UK,CET,IT)	
217	3-831-441-11	CUSHION (D)	
218	2-654-085-01	HOLDER, IR	
IC401	6-600-108-01	IC RPM7140 (IR)	
LCD401	1-802-046-11	DISPLAY PANEL, LIQUID CRYSTAL	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	

7-6. CD MECHANISM SECTION (KSM-213CDP)



Ref. No.	Part No.	Description	Remark
251	2-626-907-11	GEAR (A)	
252	2-627-003-01	GEAR (B) (RP)	
253	2-174-500-01	SCREW (2X3)	
254	2-626-908-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
255	X-2162-709-2	CHASSIS ASSY (CDP), MOTOR (SPINDLE) (including M701)	
⚠256	8-848-483-12	OPTICAL PICK-UP (KSS-213C/C2RP)	
M702	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH
- Abbreviation
  CND : Canadian model
  CET : East European & Russian model
  E41 : AC 230V area in E model
  E92 : AC 120V area in E model
  AUS : Australian model
  KR : Korea model
  MX : Mexican model
  SP : Singapore model
  IT : Italian model
  AR : Argentina model
  TH : Thai model
  TW : Taiwan model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-1157-013-A	BATTERY-1 BOARD, COMPLETE			
		**********			
	3-229-975-01	SPRING, BATTERY (–)			
		< CONNECTOR >			
CN903	1-815-550-11	PIN, CONNECTOR (PWB) 2P			
**********					
	A-1157-012-A	BATTERY-2 BOARD, COMPLETE			
		**********			
	3-229-975-01	SPRING, BATTERY (–)			
**********					
	A-1134-279-A	BD83S BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C102	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C103	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C104	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C105	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C107	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C108	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C109	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C110	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C111	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C112	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C113	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	1-128-995-21	ELECT CHIP	100uF	20%	10V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C207	1-128-995-21	ELECT CHIP	100uF	20%	10V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C210	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C213	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C214	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C215	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C217	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C220	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C223	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C226	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C227	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C230	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C232	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C252	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C253	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C256	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C257	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C258	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C260	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C261	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C264	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C266	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C267	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C268	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C272	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C273	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C274	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C275	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C276	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C277	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C291	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C292	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C304	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C321	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C323	1-128-995-21	ELECT CHIP	100uF	20%	10V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C406	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C424	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C451	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V

BD83S **HEADPHONE** **KEY-1** **KEY-2**

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN102	1-770-706-21	CONNECTOR, FFC/FPC 23P			
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC201	8-753-246-30	IC CXD3014A-201R			
IC202	6-708-736-01	IC BD18KA5FP-E2			
IC402	6-705-808-01	IC BA5947FM-E2			
		< TRANSISTOR >			
Q321	6-551-120-01	TRANSISTOR 2SA2119K			
		< RESISTOR >			
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-809-11	METAL CHIP	100	5%	1/10W
R104	1-216-809-11	METAL CHIP	100	5%	1/10W
R105	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-11	SHORT CHIP	0		
R202	1-216-295-11	SHORT CHIP	0		
R203	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R207	1-216-295-11	SHORT CHIP	0		
R250	1-216-857-11	METAL CHIP	1M	5%	1/10W
R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
R255	1-216-821-11	METAL CHIP	1K	5%	1/10W
R256	1-216-837-11	METAL CHIP	22K	5%	1/10W
R257	1-216-845-11	METAL CHIP	100K	5%	1/10W
R258	1-216-849-11	METAL CHIP	220K	5%	1/10W
R260	1-216-864-11	SHORT CHIP	0		
R265	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R266	1-216-821-11	METAL CHIP	1K	5%	1/10W
R267	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R268	1-216-833-11	METAL CHIP	10K	5%	1/10W
R270	1-216-821-11	METAL CHIP	1K	5%	1/10W
R271	1-216-857-11	METAL CHIP	1M	5%	1/10W
R275	1-216-809-11	METAL CHIP	100	5%	1/10W
R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R277	1-216-809-11	METAL CHIP	100	5%	1/10W
R278	1-216-809-11	METAL CHIP	100	5%	1/10W
R280	1-216-864-11	SHORT CHIP	0		
R291	1-216-809-11	METAL CHIP	100	5%	1/10W
R292	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R322	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R323	1-216-864-11	SHORT CHIP	0		
R324	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-295-11	SHORT CHIP	0		
R421	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R423	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-837-11	METAL CHIP	22K	5%	1/10W
R452	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< VIBRATOR >			
X201	1-795-101-21	VIBRATOR, CERAMIC (16.93MHz)			
**********					
	A-1154-900-A	HEADPHONE BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C116	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C216	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN308	1-815-445-11	PIN, CONNECTOR (PWB) 4P			
		< JACK >			
J321	1-815-325-11	JACK (🎧)			
		< RESISTOR >			
R146	1-216-809-11	METAL CHIP	100	5%	1/10W
R148	1-216-805-11	METAL CHIP	47	5%	1/10W
R246	1-216-809-11	METAL CHIP	100	5%	1/10W
R248	1-216-805-11	METAL CHIP	47	5%	1/10W
**********					
	A-1157-000-A	KEY-1 BOARD, COMPLETE			
		**********			
	1-831-613-11	CABLE, FLEXIBLE FLAT (4 CORE) (FFC412)			
	1-831-616-11	CABLE, FLEXIBLE FLAT (4 CORE) (FFC411)			
	3-831-441-99	SHEET (1)			
		< RESISTOR >			
R421	1-216-813-11	METAL CHIP	220	5%	1/10W
R422	1-216-817-11	METAL CHIP	470	5%	1/10W
R423	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S411	1-786-050-21	SWITCH, KEYBOARD (CD)			
S421	1-786-050-21	SWITCH, KEYBOARD (RADIO/BAND/AUTO PRESET)			
S422	1-786-050-21	SWITCH, KEYBOARD (TAPE)			
**********					
	A-1157-002-A	KEY-2 BOARD, COMPLETE			
		**********			
	3-831-441-99	SHEET (1)			
		< CONNECTOR >			
CN421	1-784-726-11	CONNECTOR, FFC 4P			
		< RESISTOR >			
R424	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S423	1-786-050-21	SWITCH, KEYBOARD (VOLUME –)			
S424	1-786-050-21	SWITCH, KEYBOARD (VOLUME +)			
**********					
	A-1157-008-A	MAIN BOARD, COMPLETE (CND,E92,MX)			
	A-1157-365-A	MAIN BOARD, COMPLETE (E41,SP,TH)			
	A-1157-386-A	MAIN BOARD, COMPLETE (UK,CET,IT)			
	A-1157-391-A	MAIN BOARD, COMPLETE (AEP)			
	A-1157-967-A	MAIN BOARD, COMPLETE (AUS,KR,TW)			
	A-1157-973-A	MAIN BOARD, COMPLETE (AR)			
		**********			
	1-832-008-11	CABLE, FLEXIBLE FLAT (14 CORE) (FFC802)			
	2-674-958-01	PAPER (MAIN), SHIELD			
	3-254-142-01	SCREW (B3), (+) BV TAPPING			
		< ANTENNA >			
ANT1	1-754-116-12	ANTENNA, FERRITE-ROD (MW/LW) (AEP)			
ANT1	1-754-117-12	ANTENNA, FERRITE-ROD (AM) (EXCEPT AEP)			
		< CAPACITOR >			
C1	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C2	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C3	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C4	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C6	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C7	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C9	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C10	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
					(EXCEPT CND,E92,MX)
C10	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
					(CND,E92,MX)
C11	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C12	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C13	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C14	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
					(EXCEPT CND,E92,MX)
C14	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
					(CND,E92,MX)
C15	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C16	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C17	1-104-662-11	ELECT	22uF	20%	25V
C18	1-126-963-11	ELECT	4.7uF	20%	50V
C19	1-126-956-11	ELECT	0.1uF	20%	50V
C20	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C21	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C22	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C23	1-126-947-11	ELECT	47uF	20%	35V
C24	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C25	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C26	1-115-156-11	CERAMIC CHIP	1uF		10V
C27	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C28	1-115-156-11	CERAMIC CHIP	1uF		10V
C29	1-126-925-11	ELECT	470uF	20%	10V
C30	1-126-923-11	ELECT	220uF	20%	10V
C31	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(CND,E92,MX)
C32	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C33	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(CND,E92,MX)
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C36	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C37	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C38	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C39	1-126-923-11	ELECT	220uF	20%	10V
C40	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C41	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C42	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C43	1-126-964-11	ELECT	10uF	20%	50V
C45	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C46	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C51	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C52	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(AEP)
C53	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
					(AEP)
C54	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
					(AEP)
C55	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C60	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C61	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
					(AEP)
C62	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
					(AEP)
C63	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
					(AEP)
C64	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C67	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C68	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C69	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(AEP)
C70	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C72	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C106	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C112	1-126-925-11	ELECT	470uF	20%	10V
C113	1-126-960-11	ELECT	1uF	20%	50V
C115	1-126-960-11	ELECT	1uF	20%	50V
C117	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-104-658-11	ELECT	100uF	20%	10V
C125	1-126-959-11	ELECT	0.47uF	20%	50V
C127	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C129	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C130	1-126-957-11	ELECT	0.22uF	20%	50V
C131	1-126-947-11	ELECT	47uF	20%	35V
C132	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C161	1-126-960-11	ELECT	1uF	20%	50V
C162	1-126-960-11	ELECT	1uF	20%	50V
C206	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C212	1-126-925-11	ELECT	470uF	20%	10V
C213	1-126-960-11	ELECT	1uF	20%	50V
C215	1-126-960-11	ELECT	1uF	20%	50V
C217	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C219	1-104-658-11	ELECT	100uF	20%	10V
C225	1-126-959-11	ELECT	0.47uF	20%	50V
C227	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C229	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C230	1-126-957-11	ELECT	0.22uF	20%	50V
C231	1-126-947-11	ELECT	47uF	20%	35V
C232	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C261	1-126-960-11	ELECT	1uF	20%	50V
C262	1-126-960-11	ELECT	1uF	20%	50V
C311	1-126-965-11	ELECT	22uF	20%	50V
C322	1-126-934-11	ELECT	220uF	20%	16V
C323	1-126-964-11	ELECT	10uF	20%	50V
C324	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C325	1-126-937-11	ELECT	4700uF	20%	16V
C326	1-126-923-11	ELECT	220uF	20%	10V
C330	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C331	1-126-947-11	ELECT	47uF	20%	35V
C349	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C350	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C353	1-126-925-11	ELECT	470uF	20%	10V
C354	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C355	1-126-767-11	ELECT	1000uF	20%	16V
C356	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C357	1-126-934-11	ELECT	220uF	20%	16V
C358	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C451	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C452	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C453	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C454	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C455	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C456	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C457	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C458	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C461	1-126-964-11	ELECT	10uF	20%	50V
C803	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C804	1-115-156-11	CERAMIC CHIP	1uF		10V
C805	1-104-658-11	ELECT	100uF	20%	10V
C806	1-115-156-11	CERAMIC CHIP	1uF		10V
C807	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C808	1-104-658-11	ELECT	100uF	20%	10V
C811	1-216-864-11	SHORT CHIP	0		
C813	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C814	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C815	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C816	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C817	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C818	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C819	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C820	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C821	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C822	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C823	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C825	1-115-156-11	CERAMIC CHIP	1uF		10V
C951	1-162-974-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C952	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C953	1-126-925-11	ELECT	470uF	20%	10V
C956	1-126-965-11	ELECT	22uF	20%	50V
C957	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C959	1-126-923-11	ELECT	220uF	20%	10V
C961	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< FILTER >			
CF2	1-767-555-11	FILTER, CERAMIC			
CF3	1-781-962-21	FILTER, CERAMIC			
		< CONNECTOR >			
CN304	1-815-552-11	PIN, CONNECTOR (PWB) 4P			
CN305	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
CN306	1-815-552-11	PIN, CONNECTOR (PWB) 4P			
CN803	1-784-742-11	CONNECTOR, FFC 20P			
CN804	1-784-742-11	CONNECTOR, FFC 20P			
CN805	1-779-291-11	CONNECTOR, FFC (LIF(NON-ZIF)) 23P			
		< TRIMMER >			
CT1	1-141-304-21	CAP, CERAMIC TRIMMER 10PF			
CT3	1-141-442-91	CAP, CERAMIC TRIMMER 20PF			
CT5	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF (AEP)			
		< DIODE >			
D1	6-501-440-01	DIODE SVC707-AL			
D2	6-501-440-01	DIODE SVC707-AL			
D3	6-501-392-01	DIODE SVC386-AL			
D4	8-719-991-33	DIODE 1SS133T-77			
D5	8-719-991-33	DIODE 1SS133T-77			
D6	6-500-697-01	DIODE UDZSTE-173.3B			
D322	8-719-991-33	DIODE 1SS133T-77			
D323	8-719-988-61	DIODE 1SS355TE-17			
D324	8-719-991-33	DIODE 1SS133T-77			
D461	6-500-335-01	DIODE MC2838-T112-1			
D462	8-719-069-54	DIODE UDZSTE-175.1B			
D801	8-719-991-33	DIODE 1SS133T-77			
D802	6-500-334-01	DIODE MC2836-T112-1			
D951	6-500-334-01	DIODE MC2836-T112-1			
D952	8-719-991-33	DIODE 1SS133T-77			
D953	8-719-978-33	DIODE DTZ-TT11-6.8B			
D957	8-719-083-58	DIODE UDZSTE-173.9B			
		< FERRITE BEAD >			
FB831	1-216-864-11	SHORT CHIP 0			
FB832	1-500-445-21	FERRITE, EMI (SMD) (2012)			
		< IC >			
IC1	6-708-840-01	IC LV23003VA			
IC302	6-701-919-01	IC PT2257-S			
IC303	6-703-710-01	IC TA8227P			
IC801	6-806-232-01	IC MB90802NPF-G-109E1			
IC802	6-703-740-01	IC S-24CS02AFT-TB-G			
IC804	8-759-679-43	IC S-816A33AMC-BAI-T2-G (TYPE A)			
IC805	6-704-118-01	IC S-80828CNMC-B8NT2G			
IC806	6-706-338-01	IC XC6202P332FR (TYPE B)			

Refer to NOTE FOR REPLACEMENT OF THE IC804 AND IC806 on page 4 for type A and B.

Ref. No.	Part No.	Description			Remark
		< JUMPER RESISTOR >			
JC1	1-216-864-11	SHORT CHIP	0 (EXCEPT AEP)		
JC2	1-216-864-11	SHORT CHIP	0 (AEP)		
JC3	1-216-864-11	SHORT CHIP	0 (EXCEPT AEP)		
JC4	1-216-864-11	SHORT CHIP	0 (EXCEPT AEP)		
JC101	1-216-864-11	SHORT CHIP	0		
JC102	1-216-864-11	SHORT CHIP	0		
JC103	1-216-864-11	SHORT CHIP	0		
JC804	1-216-864-11	SHORT CHIP	0		
JC807	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L1	1-419-847-11	COIL, AIR-CORE			
L2	1-419-655-11	COIL, AIR-CORE			
L3	1-411-199-31	COIL, MW/LW OSC			
L6	1-457-168-11	COIL, DET			
L803	1-410-521-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q31	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ (AEP)		
Q32	8-729-920-31	TRANSISTOR	DTC343TK (AEP)		
Q33	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ (AEP)		
Q35	8-729-601-58	TRANSISTOR	2SC3053-C (AEP)		
Q122	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q124	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q222	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q224	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q304	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q451	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q452	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q801	6-551-445-01	TRANSISTOR	RT1N44QC-TP-1		
Q802	8-729-037-03	TRANSISTOR	KTA1266GR-AT		
Q805	8-729-600-22	TRANSISTOR	2SA1235-F		
Q806	6-551-444-01	TRANSISTOR	RT1N436C-TP-1		(AEP,AUS,KR,AR,TW)
Q808	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q951	6-551-444-01	TRANSISTOR	RT1N436C-TP-1		
Q952	8-729-040-76	TRANSISTOR	KTA1273-Y-AT		
Q953	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q955	8-729-018-99	TRANSISTOR	2SD2394-F		
Q957	6-550-542-01	TRANSISTOR	2SD999-T1-AZ		
Q958	6-551-443-01	TRANSISTOR	RT1P436C-TP-1		
Q959	8-729-027-46	TRANSISTOR	DTC114YKA-T146		
		< RESISTOR >			
R1	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2	1-216-837-11	METAL CHIP	22K	5%	1/10W
R3	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R4	1-216-797-11	METAL CHIP	10	5%	1/10W
R5	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6	1-216-853-11	METAL CHIP	470K	5%	1/10W
R7	1-216-797-11	METAL CHIP	10	5%	1/10W
R9	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R10	1-216-801-11	METAL CHIP	22	5%	1/10W
R11	1-216-821-11	METAL CHIP	1K	5%	1/10W
R12	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R13	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R14	1-216-833-11	METAL CHIP	10K	5%	1/10W
R15	1-216-837-11	METAL CHIP	22K	5%	1/10W
R16	1-216-864-11	SHORT CHIP	0		
R17	1-216-864-11	SHORT CHIP	0		
R18	1-216-809-11	METAL CHIP	100	5%	1/10W
R19	1-216-809-11	METAL CHIP	100	5%	1/10W
R20	1-216-809-11	METAL CHIP	100	5%	1/10W
R21	1-216-809-11	METAL CHIP	100	5%	1/10W
R22	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R23	1-216-817-11	METAL CHIP	470	5%	1/10W
R24	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R25	1-216-821-11	METAL CHIP	1K	5%	1/10W
R26	1-216-813-11	METAL CHIP	220	5%	1/10W
R27	1-216-833-11	METAL CHIP	10K	5%	1/10W
R28	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R29	1-216-833-11	METAL CHIP	10K	5%	1/10W
R30	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP)
R31	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP)
R32	1-216-845-11	METAL CHIP	100K	5%	1/10W (AEP)
R34	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP)
R35	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (AEP)
R36	1-216-845-11	METAL CHIP	100K	5%	1/10W (AEP)
R37	1-216-853-11	METAL CHIP	470K	5%	1/10W (AEP)
R38	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (AEP)
R39	1-216-864-11	SHORT CHIP	0		
R41	1-216-837-11	METAL CHIP	22K	5%	1/10W
R134	1-216-813-11	METAL CHIP	220	5%	1/10W
R135	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R136	1-216-864-11	SHORT CHIP	0		
R138	1-216-817-11	METAL CHIP	470	5%	1/10W
R139	1-216-833-11	METAL CHIP	10K	5%	1/10W
R140	1-216-821-11	METAL CHIP	1K	5%	1/10W
R141	1-216-841-11	METAL CHIP	47K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R143	1-216-809-11	METAL CHIP	100	5%	1/10W
R144	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R145	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R147	1-216-833-11	METAL CHIP	10K	5%	1/10W
R161	1-216-841-11	METAL CHIP	47K	5%	1/10W
R162	1-216-864-11	SHORT CHIP	0		
R234	1-216-813-11	METAL CHIP	220	5%	1/10W
R235	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R236	1-216-864-11	SHORT CHIP	0		
R238	1-216-817-11	METAL CHIP	470	5%	1/10W
R239	1-216-833-11	METAL CHIP	10K	5%	1/10W
R240	1-216-821-11	METAL CHIP	1K	5%	1/10W
R241	1-216-841-11	METAL CHIP	47K	5%	1/10W
R242	1-216-821-11	METAL CHIP	1K	5%	1/10W
R243	1-216-809-11	METAL CHIP	100	5%	1/10W
R244	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R245	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R247	1-216-833-11	METAL CHIP	10K	5%	1/10W
R261	1-216-841-11	METAL CHIP	47K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R262	1-216-864-11	SHORT CHIP	0		
R316	1-216-864-11	SHORT CHIP	0		
R321	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-857-11	METAL CHIP	1M	5%	1/10W
R324	1-216-833-11	METAL CHIP	10K	5%	1/10W
R325	1-216-821-11	METAL CHIP	1K	5%	1/10W
R326	1-216-821-11	METAL CHIP	1K	5%	1/10W
R327	1-216-821-11	METAL CHIP	1K	5%	1/10W
R328	1-216-809-11	METAL CHIP	100	5%	1/10W
R329	1-216-809-11	METAL CHIP	100	5%	1/10W
R330	1-216-809-11	METAL CHIP	100	5%	1/10W
R331	1-216-817-11	METAL CHIP	470	5%	1/10W
R332	1-216-817-11	METAL CHIP	470	5%	1/10W
R333	1-216-821-11	METAL CHIP	1K	5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R336	1-216-833-11	METAL CHIP	10K	5%	1/10W
R337	1-216-833-11	METAL CHIP	10K	5%	1/10W
R338	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-821-11	METAL CHIP	1K	5%	1/10W
R452	1-216-821-11	METAL CHIP	1K	5%	1/10W
R453	1-216-833-11	METAL CHIP	10K	5%	1/10W
R461	1-216-817-11	METAL CHIP	470	5%	1/10W
R462	1-216-817-11	METAL CHIP	470	5%	1/10W
R463	1-216-817-11	METAL CHIP	470	5%	1/10W
R464	1-216-817-11	METAL CHIP	470	5%	1/10W
R465	1-216-817-11	METAL CHIP	470	5%	1/10W
R466	1-216-817-11	METAL CHIP	470	5%	1/10W
R467	1-216-821-11	METAL CHIP	1K	5%	1/10W
R471	1-216-821-11	METAL CHIP	1K	5%	1/10W
R472	1-216-821-11	METAL CHIP	1K	5%	1/10W
R473	1-216-821-11	METAL CHIP	1K	5%	1/10W
R474	1-216-821-11	METAL CHIP	1K	5%	1/10W
R475	1-216-821-11	METAL CHIP	1K	5%	1/10W
R476	1-216-845-11	METAL CHIP	100K	5%	1/10W
R477	1-216-845-11	METAL CHIP	100K	5%	1/10W
R478	1-216-841-11	METAL CHIP	47K	5%	1/10W
R479	1-216-833-11	METAL CHIP	10K	5%	1/10W
R480	1-216-841-11	METAL CHIP	47K	5%	1/10W
R481	1-216-841-11	METAL CHIP	47K	5%	1/10W
R482	1-216-821-11	METAL CHIP	1K	5%	1/10W
R483	1-216-841-11	METAL CHIP	47K	5%	1/10W
R484	1-216-841-11	METAL CHIP	47K	5%	1/10W
R486	1-216-845-11	METAL CHIP	100K	5%	1/10W
R487	1-216-845-11	METAL CHIP	100K	5%	1/10W
R488	1-216-837-11	METAL CHIP	22K	5%	1/10W
R490	1-216-864-11	SHORT CHIP	0		
R491	1-216-864-11	SHORT CHIP	0		
R492	1-216-864-11	SHORT CHIP	0		
R493	1-216-864-11	SHORT CHIP	0		
R801	1-216-821-11	METAL CHIP	1K	5%	1/10W
R802	1-216-821-11	METAL CHIP	1K	5%	1/10W
R803	1-216-821-11	METAL CHIP	1K	5%	1/10W
R804	1-216-821-11	METAL CHIP	1K	5%	1/10W
R805	1-216-821-11	METAL CHIP	1K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W
R810	1-216-821-11	METAL CHIP	1K	5%	1/10W
R811	1-216-833-11	METAL CHIP	10K	5%	1/10W
R812	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R813	1-216-821-11	METAL CHIP	1K	5%	1/10W
R814	1-216-821-11	METAL CHIP	1K	5%	1/10W
R815	1-216-809-11	METAL CHIP	100	5%	1/10W
R816	1-216-809-11	METAL CHIP	100	5%	1/10W
R817	1-216-821-11	METAL CHIP	1K	5%	1/10W
R818	1-216-821-11	METAL CHIP	1K	5%	1/10W
R819	1-216-821-11	METAL CHIP	1K	5%	1/10W
R820	1-216-853-11	METAL CHIP	470K	5%	1/10W
R821	1-216-821-11	METAL CHIP	1K	5%	1/10W
R822	1-216-821-11	METAL CHIP	1K	5%	1/10W
R823	1-216-821-11	METAL CHIP	1K	5%	1/10W
R824	1-216-821-11	METAL CHIP	1K	5%	1/10W
R825	1-216-821-11	METAL CHIP	1K	5%	1/10W
R826	1-216-817-11	METAL CHIP	470	5%	1/10W (CND,E92,MX,AR)
R826	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (AEP,AUS,KR,TW)
R827	1-216-817-11	METAL CHIP	470	5%	1/10W (AUS,KR,TW)
R827	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (AEP,AR)
R828	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R829	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R830	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R831	1-216-821-11	METAL CHIP	1K	5%	1/10W
R835	1-216-833-11	METAL CHIP	10K	5%	1/10W
R836	1-216-833-11	METAL CHIP	10K	5%	1/10W
R837	1-216-833-11	METAL CHIP	10K	5%	1/10W
R838	1-216-833-11	METAL CHIP	10K	5%	1/10W
R839	1-216-833-11	METAL CHIP	10K	5%	1/10W
R840	1-216-833-11	METAL CHIP	10K	5%	1/10W
R841	1-216-833-11	METAL CHIP	10K	5%	1/10W
R842	1-216-833-11	METAL CHIP	10K	5%	1/10W
R843	1-216-833-11	METAL CHIP	10K	5%	1/10W
R844	1-216-833-11	METAL CHIP	10K	5%	1/10W
R845	1-216-833-11	METAL CHIP	10K	5%	1/10W
R846	1-216-833-11	METAL CHIP	10K	5%	1/10W
R847	1-216-833-11	METAL CHIP	10K	5%	1/10W
R848	1-216-833-11	METAL CHIP	10K	5%	1/10W
R849	1-216-833-11	METAL CHIP	10K	5%	1/10W
R850	1-216-833-11	METAL CHIP	10K	5%	1/10W
R851	1-216-833-11	METAL CHIP	10K	5%	1/10W
R852	1-216-833-11	METAL CHIP	10K	5%	1/10W
R853	1-216-833-11	METAL CHIP	10K	5%	1/10W
R854	1-216-833-11	METAL CHIP	10K	5%	1/10W
R855	1-216-833-11	METAL CHIP	10K	5%	1/10W
R856	1-216-833-11	METAL CHIP	10K	5%	1/10W
R857	1-216-833-11	METAL CHIP	10K	5%	1/10W
R858	1-216-833-11	METAL CHIP	10K	5%	1/10W
R859	1-216-833-11	METAL CHIP	10K	5%	1/10W
R860	1-216-833-11	METAL CHIP	10K	5%	1/10W
R861	1-216-833-11	METAL CHIP	10K	5%	1/10W
R862	1-216-833-11	METAL CHIP	10K	5%	1/10W
R863	1-216-833-11	METAL CHIP	10K	5%	1/10W
R864	1-216-833-11	METAL CHIP	10K	5%	1/10W
R865	1-216-833-11	METAL CHIP	10K	5%	1/10W
R866	1-216-833-11	METAL CHIP	10K	5%	1/10W
R867	1-216-833-11	METAL CHIP	10K	5%	1/10W
R868	1-216-817-11	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remark
R869	1-216-821-11	METAL CHIP	1K	5%	1/10W
R870	1-216-821-11	METAL CHIP	1K	5%	1/10W
R871	1-216-821-11	METAL CHIP	1K	5%	1/10W
R872	1-216-821-11	METAL CHIP	1K	5%	1/10W
R873	1-216-821-11	METAL CHIP	1K	5%	1/10W
R874	1-216-821-11	METAL CHIP	1K	5%	1/10W
R875	1-216-821-11	METAL CHIP	1K	5%	1/10W
R876	1-216-821-11	METAL CHIP	1K	5%	1/10W
R877	1-216-821-11	METAL CHIP	1K	5%	1/10W
R878	1-216-821-11	METAL CHIP	1K	5%	1/10W
R879	1-216-821-11	METAL CHIP	1K	5%	1/10W
R880	1-216-821-11	METAL CHIP	1K	5%	1/10W
R883	1-216-845-11	METAL CHIP	100K	5%	1/10W
R884	1-216-849-11	METAL CHIP	220K	5%	1/10W (TYPE A)
R885	1-216-821-11	METAL CHIP	1K	5%	1/10W (TYPE A)
R886	1-216-841-11	METAL CHIP	47K	5%	1/10W
R887	1-216-837-11	METAL CHIP	22K	5%	1/10W
R888	1-216-837-11	METAL CHIP	22K	5%	1/10W
R889	1-216-833-11	METAL CHIP	10K	5%	1/10W
R891	1-216-841-11	METAL CHIP	47K	5%	1/10W
R892	1-216-864-11	SHORT CHIP	0		
R893	1-216-833-11	METAL CHIP	10K	5%	1/10W
R894	1-216-833-11	METAL CHIP	10K	5%	1/10W
R896	1-216-833-11	METAL CHIP	10K	5%	1/10W
R897	1-216-833-11	METAL CHIP	10K	5%	1/10W
R898	1-216-817-11	METAL CHIP	470	5%	1/10W (UK,E41,CET,IT,SP,TH)
R899	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R951	1-216-841-11	METAL CHIP	47K	5%	1/10W
R952	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R953	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R956	1-216-833-11	METAL CHIP	10K	5%	1/10W
R957	1-216-833-11	METAL CHIP	10K	5%	1/10W
R958	1-216-813-11	METAL CHIP	220	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R962	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R963	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R964	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R965	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF			
		< VIBRATOR >			
X1	1-795-449-11	VIBRATOR, CRYSTAL (75kHz)			
X802	1-813-175-21	VIBRATOR, CERAMIC (4.19MHz)			

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Ref. No.	Part No.	Description			Remark
	A-1157-006-A	PANEL BOARD, COMPLETE			
		**********			
	1-832-009-11	CABLE, FLEXIBLE FLAT (20 CORE)			(FFC401,FFC402)
	2-654-085-01	HOLDER, IR			
	2-673-399-01	SHEET (IR), ADHESIVE			
	3-831-441-99	SHEET (1)			
		< CAPACITOR >			
C401	1-115-156-11	CERAMIC CHIP	1uF		10V
		< CONNECTOR >			
CN403	1-784-726-11	CONNECTOR, FFC 4P			
		< DIODE >			
D406	8-719-059-97	LED L-34HD (OPR/BATT)			
		< IC >			
IC401	6-600-108-01	IC RPM7140 (IR)			
		< LIQUID CRYSTAL DISPLAY >			
LCD401	1-802-046-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< RESISTOR >			
R401	1-216-813-11	METAL CHIP	220	5%	1/10W
R402	1-216-817-11	METAL CHIP	470	5%	1/10W
R403	1-216-821-11	METAL CHIP	1K	5%	1/10W
R404	1-216-821-11	METAL CHIP	1K	5%	1/10W
R405	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R407	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R409	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R411	1-216-813-11	METAL CHIP	220	5%	1/10W
R412	1-216-817-11	METAL CHIP	470	5%	1/10W
R413	1-216-821-11	METAL CHIP	1K	5%	1/10W
R414	1-216-821-11	METAL CHIP	1K	5%	1/10W
R415	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R416	1-216-821-11	METAL CHIP	1K	5%	1/10W
R417	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R418	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R419	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R430	1-216-813-11	METAL CHIP	220	5%	1/10W
R431	1-216-841-11	METAL CHIP	47K	5%	1/10W
R432	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< SWITCH >			
S401	1-786-050-21	SWITCH, KEYBOARD (●/OPERATE)			(AEP,UK,CET,IT)
S401	1-786-050-21	SWITCH, KEYBOARD (●/POWER)			(EXCEPT AEP,UK,CET,IT)
S402	1-786-050-21	SWITCH, KEYBOARD (SLEEP)			
S403	1-786-050-21	SWITCH, KEYBOARD (MEGA BASS)			
S404	1-786-050-21	SWITCH, KEYBOARD (DISPLAY/ENTER)			
S405	1-786-050-21	SWITCH, KEYBOARD (MODE)			
S406	1-786-050-21	SWITCH, KEYBOARD (REPEAT)			

Refer to NOTE FOR REPLACEMENT OF THE IC804 AND IC806 on page 4 for type A and B.

CFD-S03CP/S03CPL

Ver. 1.2

PANEL **POWER** **TC**

Ref. No.	Part No.	Description			Remark
S407	1-786-050-21	SWITCH, KEYBOARD (▶II)			
S413	1-786-050-21	SWITCH, KEYBOARD (I◀◀/PRESET –)			
S414	1-786-050-21	SWITCH, KEYBOARD (▶▶I/PRESET +)			
S415	1-786-050-21	SWITCH, KEYBOARD (🗀/TUNE –)			
S416	1-786-050-21	SWITCH, KEYBOARD (🗀/TUNE +)			
S417	1-786-050-21	SWITCH, KEYBOARD (■)			
**********					
	A-1157-015-A	POWER BOARD, COMPLETE (E92,MX)			
	A-1157-362-A	POWER BOARD, COMPLETE (EXCEPT CND,E92,MX,TW)			
	A-1157-370-A	POWER BOARD, COMPLETE (CND)			
	A-1157-380-A	POWER BOARD, COMPLETE (TW)			
		**********			
	1-533-217-41	HOLDER, FUSE			
		< CAPACITOR >			
C901	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C902	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C903	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C904	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C906	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
CN902	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
		< DIODE >			
D901	8-719-063-79	DIODE 1N4002B			
D902	8-719-063-79	DIODE 1N4002B			
D903	8-719-063-79	DIODE 1N4002B			
D904	8-719-063-79	DIODE 1N4002B			
		< AC INLET >			
⚠J901	1-526-818-11	INLET, AC (~ AC IN) (E92,MX)			
⚠J901	1-526-838-11	INLET, AC 2P (~ AC IN) (EXCEPT CND,E92,MX)			
⚠J901	1-540-009-11	INLET, AC (~ AC IN) (CND)			
**********					
	A-1156-999-A	TC BOARD, COMPLETE (AEP,UK,CET,KR,IT)			
	A-1158-597-A	TC BOARD, COMPLETE (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
		**********			
		< CAPACITOR >			
C101	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C102	1-104-658-11	ELECT	100uF	20%	10V
C103	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C104	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C105	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C107	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C201	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C202	1-104-658-11	ELECT	100uF	20%	10V
C203	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C204	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C205	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C207	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C301	1-104-658-11	ELECT	100uF	20%	10V
C302	1-104-658-11	ELECT	100uF	20%	10V
C303	1-104-658-11	ELECT	100uF	20%	10V
C304	1-126-947-11	ELECT	47uF	20%	35V

Ref. No.	Part No.	Description			Remark
C305	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C312	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C318	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
		< CONNECTOR >			
CN301	1-784-775-11	CONNECTOR, FFC 14P			
		< FERRITE BEAD >			
FB201	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB201	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB202	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB202	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB203	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB203	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB204	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB204	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB205	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB205	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB206	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB206	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
FB207	1-216-864-11	SHORT CHIP 0 (CND,E41,E92,AUS,MX,SP,AR,TH,TW)			
FB207	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,KR,IT)			
		< IC >			
IC301	8-759-264-71	IC TA2068N			
		< JUMPER RESISTOR >			
JC302	1-216-864-11	SHORT CHIP 0			
JC303	1-216-864-11	SHORT CHIP 0			
JC305	1-216-864-11	SHORT CHIP 0			
JC306	1-216-864-11	SHORT CHIP 0			
JC307	1-216-864-11	SHORT CHIP 0			
JC308	1-216-864-11	SHORT CHIP 0			
		< TRANSISTOR >			
Q301	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
Q302	8-729-027-46	TRANSISTOR DTC114YKA-T146			
Q303	8-729-027-46	TRANSISTOR DTC114YKA-T146			
		< RESISTOR >			
R101	1-216-837-11	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R102	1-216-805-11	METAL CHIP	47	5%	1/10W
R103	1-216-845-11	METAL CHIP	100K	5%	1/10W
R104	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R105	1-216-837-11	METAL CHIP	22K	5%	1/10W
R106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R107	1-216-841-11	METAL CHIP	47K	5%	1/10W
R108	1-216-801-11	METAL CHIP	22	5%	1/10W
R109	1-216-849-11	METAL CHIP	220K	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W
R111	1-216-833-11	METAL CHIP	10K	5%	1/10W
R112	1-216-821-11	METAL CHIP	1K	5%	1/10W
R201	1-216-837-11	METAL CHIP	22K	5%	1/10W
R202	1-216-805-11	METAL CHIP	47	5%	1/10W
R203	1-216-845-11	METAL CHIP	100K	5%	1/10W
R204	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R205	1-216-837-11	METAL CHIP	22K	5%	1/10W
R206	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R207	1-216-841-11	METAL CHIP	47K	5%	1/10W
R208	1-216-801-11	METAL CHIP	22	5%	1/10W
R209	1-216-849-11	METAL CHIP	220K	5%	1/10W
R210	1-216-809-11	METAL CHIP	100	5%	1/10W
R211	1-216-833-11	METAL CHIP	10K	5%	1/10W
R212	1-216-821-11	METAL CHIP	1K	5%	1/10W
R301	1-216-857-11	METAL CHIP	1M	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R304	1-216-821-11	METAL CHIP	1K	5%	1/10W
R305	1-216-817-11	METAL CHIP	470	5%	1/10W
R306	1-216-833-11	METAL CHIP	10K	5%	1/10W
R307	1-216-797-11	METAL CHIP	10	5%	1/10W
R308	1-216-837-11	METAL CHIP	22K	5%	1/10W
R309	1-216-805-11	METAL CHIP	47	5%	1/10W
R310	1-216-857-11	METAL CHIP	1M	5%	1/10W
R311	1-216-857-11	METAL CHIP	1M	5%	1/10W
R312	1-216-837-11	METAL CHIP	22K	5%	1/10W
R314	1-216-817-11	METAL CHIP	470	5%	1/10W
R315	1-216-817-11	METAL CHIP	470	5%	1/10W
		< SWITCH >			
S301	1-786-126-11	SWITCH, SLIDE (REC/PB)			
		< TRANSFORMER >			
T301	1-416-041-11	TRANSFORMER, BIAS OSCILLATION			
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		MISCELLANEOUS			
		**********			
56	1-797-376-11	DECK, MECHANICAL (including M901)			
152	1-452-899-11	MAGNET			
204	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)			
205	1-831-973-11	CABLE, FLEXIBLE FLAT (23 CORE)			
255	X-2162-709-2	CHASSIS ASSY (CDP), MOTOR (SPINDLE) (including M701)			
⚠256	8-848-483-12	OPTICAL PICK-UP (KSS-213C/C2RP)			
ANT2	1-754-376-11	ANTENNA, TELESCOPIC (FM)			
⚠F902	1-533-468-12	FUSE, GLASS TUBE (DIA. 5) (T2AL/250V)			
M702	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)			
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)			

Ref. No.	Part No.	Description	Remark
SW2	1-692-960-21	SWITCH, PUSH (1 KEY) (⏏ PUSH OPEN/CLOSE)	
SP101	1-826-280-11	SPEAKER (7.7cm) (L-CH)	
SP201	1-826-280-11	SPEAKER (7.7cm) (R-CH)	
⚠T901	1-443-861-11	TRANSFORMER, POWER (EXCEPT CND,E92,MX)	
⚠T901	1-443-871-11	TRANSFORMER, POWER (CND,E92,MX)	
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		ACCESSORIES	
		**********	
⚠	1-590-342-12	CORD, POWER (E92,MX)	
⚠	1-769-412-22	CORD, POWER (AEP,CET,E41,IT,SP,TH)	
⚠	1-770-019-61	ADAPTOR, CONVERSION PLUG (UK)	
⚠	1-776-985-12	CORD, POWER (KR)	
⚠	1-782-126-11	CORD, POWER (CND)	
⚠	1-783-952-21	CORD, POWER (AR)	
⚠	1-827-945-12	CORD, POWER (AUS)	
⚠	1-827-946-21	CORD, POWER (UK)	
⚠	1-829-433-11	CORD, POWER (TW)	
	2-655-836-11	MANUAL, INSTRUCTION (ENGLISH) (CND,E92,TW)	
	2-655-836-21	MANUAL, INSTRUCTION (SPANISH) (E92,MX)	
	2-655-836-31	MANUAL, INSTRUCTION (FRENCH) (AEP,SP)	
	2-655-836-41	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	2-655-836-51	MANUAL, INSTRUCTION (DUTCH,PORTUGUESE) (AEP)	
	2-655-836-61	MANUAL, INSTRUCTION (ITALIAN) (IT)	
	2-655-836-71	MANUAL, INSTRUCTION (FINNISH,SWEDISH) (CET)	
	2-655-836-81	MANUAL, INSTRUCTION (POLISH) (CET)	
	2-655-836-91	MANUAL, INSTRUCTION (CZECH,HUNGARIAN) (CET)	
	2-655-837-11	MANUAL, INSTRUCTION (SLOVAKIAN,RUSSIAN) (CET)	
	2-655-837-21	MANUAL, INSTRUCTION (ENGLISH) (AEP,UK,AUS,KR,E41,AR,SP,TH)	
	2-655-837-31	MANUAL, INSTRUCTION (KOREAN) (KR)	
	2-655-837-41	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TW)	
	2-655-837-51	MANUAL, INSTRUCTION (FRENCH) (CND)	
	2-655-837-61	MANUAL, INSTRUCTION (SPANISH) (AEP,E41,AR)	
	2-655-837-71	MANUAL, INSTRUCTION (UKRAINIAN) (CET)	
	3-238-070-01	LID, BATTERY CASE (for RMT-CE95A/CE95AD)	
	A-3172-070-A	REMOTE COMMANDER (RMT-CE95AD) (AEP,UK,CET,IT)	
	A-3172-079-A	REMOTE COMMANDER (RMT-CE95A) (CND,E41,E92,AUS,AR,KR,MX,SP,TH,TW)	

REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2006.01	New
1.1	2006.02	E41, Australian, Italian, Argentina, Thai and Taiwan model addition.
1.2	2006.03	Canadian model addition.
1.3	2006.04	Silver model addition of blue type to CET model.
1.4	2007.03	Change of 3.3V regulator circuit. (SPM-07020)
1.5	2007.07	MANUAL, INSTRUCTION of ukrainian is added to East European & Russian models of CFD-S03CP. (SPM-07058)